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INTRODUCTION

Siddha system of medicine is indigenous medicine. This system has been developed purely by the contribution of Siddhars on their own line of thinking and achievements in the field of their research.

The word Siddha has derived from the word Siddhi which literally means attaining perfection in life.

This system of medicine is founded by Siddhars on the basic principles of nature and its elements after careful and thorough study of the human systems. Siddha system has holistic view on patient.

Siddha is perhaps the earliest medical science that laid stress on positive health, a harmonious blending of physical, mental, social, moral and spiritual welfare of an individual.

This system has its own well developed chemistry and their tireless striving in the direction of the development of alchemy, has resulted in the genesis of thousands of mineral and metallic preparations.

Universe is made up of five elements (viz) Mann, Neer, Thee, Vayu and Aakayam. Like Universe, Body is also made up of five elements. These five elements are basic fundamentals of our body.

Seasonal variations and environmental pollutions tell on our body. Because any change in the universe will be reflected in our body.

Mind at rest is a temple of joy - an emphatic yes. But it is rather surprising that in the world of today, there seems to be no individual who is blessed with peace of mind.

Leave alone human mental health, the person's physical health is completely shattered by his worry or anxiety or tension of however, one may like to connote it. This deterioration in physical health is termed Disease.

Siddhars toiled to restore primarily his mental peace and thus to make him healthy. For Mental health everyone should follow Attangha Yogam. Attangha Yogam are mentioned in Tamil 3000 as follows,

“இயம நியமமே எண்ணிலா ஆதனம்
நயமுறு பிராணா யாமம் பிரத் தியாகாரஞ்
சயமிகு தாரணை தியானஞ் சமாதி
அயமுறும் அட்டாங்க மாவது மாமே”

- தமிழ் 3000.

According to Siddha Medicine, there is close and intimate connection between the mind and the body. If any one of the mind or body alters from its normal functions, other one will affect automatically.

So mind and body health are maintained in balanced level which is very essential to protect our body and mind from disease. This is the motivation of our Siddha System of Medicine.

SIDDHA PHYSIOLOGY

SIDDHARS

A sect of people with tremendous power in themselves who were called as Siddhars having perpetual power developed by their mental concentration. They postulated a definite and distinct hypothetical theory for the physiology, pathology and treatment of diseases.

SIDDHA LITERATURES

Tamil literatures are really a boon to our Siddha medicine, because finished, on - going and forth coming researches are all based upon these literatures.

Siddha literatures can give more information about multifaceted siddha system of medicine. The importance of reading siddha literatures have been revealed by the following poetry lines.

“சீராங்குளவி சிறுபுழுவைக் கொண்டப்பால்
வேறாமொரு கூட்டில் விட்டேதன் - பேறா
முருவதனைத்தான் நோக்கவுற்ற சீர்போலக்
கருத நூலாலாகுங் கற்று”

- கண்ணுசாமியம்.

The transformation of wasp from the worm which was taken by another wasp to another nest due to its constant thinking. Likewise reading

literatures and constant thinking about the same will certainly result in beneficial effect.

Even though it is told commonly, it is very much need to Siddha physicians indeed.

SIDDHA PHYSICIANS

Siddha physicians should have multifarious knowledge about astrology, planetary positions and movements, numerology, scientific respiratory practices, alchemy, saint Agathiyar's medical texts, texts of mantra, kanmakandam. It is given in the following lines from 18 Siddhars Naadi Nool.

“சோதிடம் பஞ்ச பட்சி
துலங்கிய சரநூல் மார்க்கம்
கோதறு வகார வித்தை
குருமுனி ஓது பாடல்
தீதிலாக் கக்கி ஷங்கள்
செப்பிய கன்ம காண்டம்
ஈதெலாங் கற்று ணர்ந்தோர்
இவர்களே வைத்ய ராவார்”

- பதினெண் சித்தர் நாடி நூல்.

Our body has three parts.

1. Subtle physical body (Nun udal)
2. Gross physical body (Paru udal)
3. Casual body (Kaarana udal).

1. Subtle physical body

It consists of Gnanenthriyam -5

Kanmenthrium -5

Anthakaranam -4

Uyirkkaal -1.

Thus totaling fifteen in the body.

2. Gross physical body

It built out of Pancha bootham.

3. Casual body

The detached nature of the above said two bodies constitute this type.

The subtle physical body is immediately behind the gross physical body and is closely connected with it.

Man is a product of nature. Man harbours within himself Divine; without the embraces the world. The soul is also a link between man's past life and future life.

Man develops three distinct personalities namely, the mind, the vital or life force and the body.

Through the mind he thinks and wills; through the vital or life force he executes his thought and will; through the physical body he expresses what he thinks and wills.

The mind and vital life force are hidden in the gross physical body and evolve gradually. Death means the gross physical body without the subtle physical body.

Vali, Azhal, Iyam are the three humors which are the life constituents of the human body. But still, there's predominant Vali, below the umbilicus, predominant Azhal in the abdomen and thorax regions and predominant Iyam in the head and neck region.

VALI

Vali is responsible for the Creation of our body.

Vali dwells in the following places; Umbilicus, Idagalai, Abaanan, Faecal matters, Abdomen, Anus, Bones, Hip joints, Skin, Joints, Hair follicles and Muscles.

KINDS OF VALI

It has got ten different forms and actions.

1. Uyirkkaal - It is essential for respiration.
2. Keelnokkukkaal - It contracts the anus. It is responsible for excretion of urine and faeces. It helps to take the essence of the digested food to the different parts of the body.
3. Melnokkukkaal - It starts from the Udharaakkini and takes the essence of food and stations it at appropriate places.

4. Paravukhaal - It activates voluntary and involuntary movements of the body and thus makes them to extend or flex. It appreciates the sense of touch.
5. Nadukhaal - This is responsible for the balance of the other vayus. It equalizes the Arusuvai, Water and Food. It helps in assimilation.
6. Vaanthikkaal - It is responsible for higher intellectual functions. It causes closing and opening of the eyelids and goose flesh.
7. Vizhikkaal - It causes winking of the eyelids, yawning, closure of mouth and lacrimation. It helps to visualize things.
8. Thummikkaal - It lies in the tongue and causes nasal and salivary secretions. It is responsible for sneezing, cough and hunger.
9. Kottavikkaal - Lethargy, tiredness and human passions are attributed to this. It stays at the kutham (anus) and kuyyam (penis or vagina)
10. Veengukkaal - It functions from the nose. It departs from the body after third day of death by head explode.

AZHAL

Azhal is responsible for the protection of our body.

Azhal sustains in the Pingalai, Praanan, Urinary bladder, and Heart.

KINDS OF AZHAL

It is of five types depending upon the locations and the functions.

1. Aakkanal - It lies between the stomach and the intestines. It causes digestion.
2. Vanna yeri - It lies in the stomach and gives red colour to the chyme and produces blood.
3. Aattralangi - It lies in the heart. It has intelligence, knowledge and it finishes favourable works.
4. Nokkazhal - It lies in the eyes and causes the faculty of vision. It helps of visualize things.
5. Olloliththee - It gives colour, complexion and brightness to the skin.

IYAM

Iyam is responsible for the destruction of our body.

Samaanan, Suzhimunai, Head, Tongue, Uvula, Eyes, Nose, Bone marrow, Joints, Blood, Fat, Sperm and Colon are the seats of the Iyam.

KINDS OF IYAM

1. Ali Iyam - It lies in the lungs and helps in respiration.
This is vital among all types of Iyam, because it controls the other Iyam and maintains equilibrium.
2. Neerppi Iyam - It lies in the stomach. It mixes the consumed food and water. It promotes the digestive process.
3. Suvaikaan Iyam - It lies in the tongue and helps to appreciate the taste of the consuming food.
4. Niraivu Iyam - Sustaining in the head, this gives refrigerant effect to cool the eyes and other sense organs.
5. Ontri Iyam - Sustaining in the joints, this makes them move freely and easily.

96 THATHUVAM

In Universe each and every atom consists of 96 thathuvam. 96 thathuvam control and act the Uyir in powerful manner.

Panchabootham - 5

1. Mann - All organisms and materials are formed and are well grown.

- | | | |
|---------|---|--|
| 2. Neer | - | It gives chillness, and softness. It unites all things. |
| 3. Thee | - | It gives heat, sharpness, dryness and brightness. It makes all things colourfully. |
| 4. Vayu | - | It gives tiredness to the body. |
| 5. Vinn | - | It gives space to all other boothams. |

Pori - 5

1. Ear
2. Skin
3. Eye
4. Tongue
5. Nose

Pulan - 5

1. Sound
2. Touch
3. Light
4. Taste
5. Smell

Kanmenthirium - 5

- | | | |
|---------------|---|------|
| 1. Mouth | - | Vinn |
| 2. Leg | - | Vayu |
| 3. Hand | - | Thee |
| 4. Anus | - | Neer |
| 5. Sex organs | - | Mann |

Anthakaranam - 4

1. Manam - It thinks based upon delight and regret
2. Puththi - It analyses based upon Nal vinai and Thee vinai
3. Aganthai - Inspiration
4. Siddham - Determination and Achievement.

Arivu - 1 – Wisdom**Naadi - 10**

1. Idakalai
2. Pinkalai
3. Suzhumunai
4. Siguvai
5. Purudan
6. Kanthari
7. Aththi
8. Alampudai
9. Sankini
10. Gugu

Vayu -10

1. Uyirkkaal
2. Keelnokkukkaal
3. Melnokkukkaal
4. Paravukaal
5. Nadukkaal

6. Vaanthikkaal
7. Vizhikkaal
8. Thummikkaal
9. Kottavikkaal
10. Veengukkaal

Aasayam - 5

1. Amarvasayam - Stomach
2. Pahirvasayam - Liver and intestines
3. Salavasayam - Urinary system
4. Malavasayam - Rectum and anus
5. Sukkilavasayam - Genital organs

Kosam - 5

1. Annamaya kosam - It consists of body with 7 Udal thathukkal.
2. Piranamaya kosam - Praanan + Kanmenthirium.
3. Manomaya kosam - Manam + Gnanenthirium.
4. Vingnanamaya kosam - Puththi + Gnanenthirium.
5. Aanandhamaya kosam - Praanan + Suzhuththi.

Aatharam - 6

1. Moolatharam - Between the anus and external genitalia
2. Swathitanam - It lies 2 inches above Moolatharam
3. Manipooragam - It lies 8 inches above Swathitanam
4. Anagatham - It lies 10 inches above Manipooragam

5. Vishuthi - It lies 10 inches above Anagatham
6. Aakkinai - It lies 12 inches above Vishuthi

Mandalam - 3

1. Thee mandalam - Moolatharam + Swathitanam
2. Gnayiru Mandalam - Manipooragam + Anagatham
3. Thingal Mandalam - Vishuthi + Aakkinai

Malam - 3

1. Aanavam
2. Maayai
3. Kaamiyam

Thodam - 3

1. Vadham - Derangement of Vayu
2. Pitham - Derangement of Thee
3. Kabam - Derangement of Neer

Edanai - 3

1. Porul patru
2. Puthalvar patru
3. Ulaga patru

Gunam - 3

1. Sathuva gunam
2. Rasatha gunam
3. Thamatha gunam

Vinai - 2

1. Nal vinai
2. Thee vinai

Ragam - 8

1. Kaamam
2. Krotham
3. Lopam
4. Moham
5. Matham
6. Marcharyam
7. Idumbai
8. Agankaaram

Avaththai - 5

1. Ninaivu
2. Kanavu
3. Urakkam
4. Paerurakkam
5. Uyirppadakkam

“முப்பது முப்பது முப்பத்த றுவரும்
செப்பு மதிலுடைக் கோவிலுள் வாழ்பவர்
செப்புமதிலுடைக் கோவில் சிதைந்தபின்
ஒப்பிலனைவரும் ஓடெடுத்தாரே”

- வேதாந்த தத்துவக் கட்டளை.

96 thathuvam are omni present. Man having 96 thathuvam is like a Divine in the temple.

If temple is collapsed, 96 thathuvam willn't be stable there.

Udal Thathukkal - 7

Udal thathukkal control the normal functions of the body. Increasing or decreasing of the Udal thathukkal can affect the body. So maintenance of Udal thathukkal in their normal level are very important.

1. Saaram
2. Senneer
3. Oon
4. Kozhuppu
5. Enbu
6. Moolai
7. Sukkilam/Suronitham

Malam - 3

Malam means waste products of the body.

1. Motion
2. Urine
3. Sweating

Udal Vanmai -3

1. Eyarkai vanmai - It is formed from Mukkunam naturally.
2. Kaala vanmai - It is formed by different age periods and seasons.
3. Seyarkai vanmai - Body is protected in healthy level by diet, good habits and medicine.

Vegangal - 14 (Natural Urges -14)

1. Vadham
2. Thummal
3. Siruneer
4. Malam
5. Kottavi
6. Pasi
7. Neer vetkai
8. Kasam
9. Elaippu
10. Nithirai
11. Vaanthi
12. Kanneer
13. Sukkilam/Suronitham
14. Suvaasam

Udal Akkini - 4

1. Samaakkini
2. Mandhakkini
3. Deekshanakkini
4. Vishamaakkini

Suvai - 6

Suvai is appreciated by tongue. Each suvai consists of 2 bootham.

- | | | | | |
|--------------|---|------|---|------|
| 1. Inippu | - | Mann | + | Neer |
| 2. Pulippu | - | Mann | + | Thee |
| 3. Uppu | - | Neer | + | Thee |
| 4. Kaippu | - | Vali | + | Vinn |
| 5. Kaarppu | - | Vali | + | Thee |
| 6. Thuvarppu | - | Mann | + | Vali |

Seasons

Seasons are formed by rotation and revolution of earth.

Ancient Tamils had their own divisions of the year into different seasons (Perumpozhudhu) and the day into parts (Sirupozhudhu)

Division of the Year (Perumpozhudhu)

Revolution of the Earth causes seasonal changes.

The year is divided into six seasons consisting of two months each.

- | | | |
|------------------|---|--------------------|
| 1. Kaar kaalam | - | Aavani, Purattasi |
| 2. Kuthir kaalam | - | Iypasi, Kaarthigai |

3. Munpani kaalam - Markazhi, Thai
4. Pinpanikaalam - Maasi, Panguni
5. Ilavenir kaalam - Chiththirai, Vaikasi
6. Muthuvenir kaalam - Aani, Aadi

Divisions of the Day (Sirupozhudhu)

Rotation of the Earth causes day. The day is divided into six parts and they are,

- Vaikarai - Dawn
- Kaalai - Morning
- Yaerppaadu - Forenoon
- Nannpagal - Noon
- Maalai - Evening
- Yaaman - Night

The Formation of Ayanam

The beginning of the year from the Tamil month Thai has two divisions; so named as Ayanam; namely Uththarayanam and Dhatshinayanam.

The Sun taking northward course is called Uththarayanam and the Sun taking southward course is called Dhatshinayanam.

Urampokki Kaalam

In Uththarayanam, excessive heat and dryness are present. This can decrease the strength of the entire living organism. This period is called as Urampokki kaalam.

This consists of Pinpani kaalam, Ilavenir kaalam and Muthuvenir kaalam.

Aakka Kaalam

In Dhatshinayanam, humidity is present due to rain. So all organisms are having strength. This is called as Aakka kaalam.

This consists of Kaar kaalam, Kuthir kaalam and Munpani kaalam.

SIDDHA PATHOLOGY

Pathology is the study of disease. The concept of disease is as old as life. Since the beginning of mankind, there has been desire as well as need to know more about the causes and mechanisms of disease.

The answers to these questions have evolved over the centuries - from supernatural beliefs to the present state of our knowledge of modern pathology.

DISEASE

Disease means any deviation or interruption from the normal functions of body. Another interpretation about disease is what existing in the mind, will experiencing in the body.

Siddha system approaches the disease by the basis of Vali, Azhal, Iyam. In healthy individual the ratio of Vali, Azhal, Iyam is 1:1/2: 1/4. Any imbalance in this ratio causes disease. The enjoyment of life is associated with pleasure. Disease is opposed to this sense of pleasure.

Diseases are of two kinds,

1. Pertaining to the body
2. Pertaining to the mind.

The principle of Siddha system seems to answer the onset of the disease.

CAUSES FOR DISEASE

Occurrence of disease in the body is due to,

1. Derangement of Uyir thathukkal
2. Alterations in Udal thathukkal
3. Seasonal variations
4. Changes in food habits
5. Constraint of 14 Natural urges.

1. DERANGEMENT OF UYIR THATHUKKAL

Uyir thathukkal are basic constituents of the body. Changes in Uyir thathukkal are called Mukkutram which is assessed by Naadi.

Abnormal Functions of the Vali

1. Body ache and pain
2. Nervous debility
3. Tremor, Tremulousness
4. Dryness
5. Weight loss
6. Constipation, Concentrated urination
7. Weakness of functional organs and loss of functions
8. Goose flesh
9. Stiffness of upper and lower limbs
10. The skin, eyes, urine and faeces are changed in to black colour.

Abnormal Functions of the Azhal

1. Increased hunger
2. Increased thirst
3. Burning sensation in the body
4. Decreased sleep
5. Yellowish discolouration of the skin, eyes, urine and faeces.

Abnormal Functions of the Iyam

1. Reduced appetite
2. Increased salivation
3. Loss of Perseverance
4. Heaviness of the body
5. Chillness of the body
6. Pallor
7. Increased sleep
8. Flatulence
9. Cough
10. Weakness in all joints of the body

2. ALTERATIONS IN UDAL THATHUKKAL

The human body is made of seven basic physical constituents. These constituents should be in harmony and normality. Any variation in them will lead to their functional deviations.

The Variations of the Udal Thathukkal

1. Saaram

Increased Saaram leads to diseases of increased Iyam like reduced appetite.

Decreased Saaram leads to dryness of the skin, tiredness, and diminished activity of the sense organs.

2. Senneer

Increased Senneer causes boils in different parts of the body, reduced appetite, and reddish eye and skin.

Decreased Senneer leads to tiredness, nervous debility, pallor, and desire to take sour and chill foods.

3. Oon

Oon in excess causes kandamaalai, kiranthi and hypermuscular in the neck.

Decreased Oon leads to impairment of sense organs, joint pain and jaw, thigh get shortened.

4. Kozhuppu

The signs of increased Kozhuppu are identical to that of Increased Oon associated with tiredness.

Decreased Kozhuppu leads to pain in the hip region, and weight loss.

5. Enbu

Excess of Enbu causes growth in the bones and teeth.

Decreased Enbu causes the pain in joints, loosening of teeth, splitting and falling of hair and nails.

6. Moolai

Increased Moolai causes heaviness, swollen eyes, swollen phalanges, diminution of urine, and non healing ulcers.

Decreased Moolai causes sunken eyes.

7. Sukkilam

Excess Sukkilam causes love and lust towards women, and urinary calculi.

Decreased Sukkilam causes failure in reproduction, and pain in the genitalia.

3. SEASONAL VARIATIONS

Seasonal variations which affect the normal constituents of the body and these cause diseases.

Thannilai Valarchchi means Mukkutram are increasing from their normal level.

Piranilai Valarchchi means increased Mukkutram spread in to other places.

Thannilai Adaithal means Mukkutram are stable in their own places.

Table No : 1
Seasonal Variations of Uyir Thathukkal

S.No.	Muklutram	Thannilai valarchchi	Piranilai Valarchchi	Thannilai Adaithal
1.	Vali	Muthuvenir kaalam	Kaar kaalam	Kuthir kaalam
2.	Azhal	Kaar kaalam	Kuthir kaalam	Munpani kaalam
3.	Iyam	Pinpani kaalam	Ilavenir kaalam	Muthuvenir kaalam

4. CHANGES IN FOOD HABITS

Food is the basic and essential requirement for keeping the body and its parts, to grow well and do their work properly for a long time. In short, the long life, mind, speech and actions of the body, depend upon one's food.

According to tradition, consuming food twice a day is good. If he takes food for more than three times a day, he will become sick and will be inflicted with innumerable diseases.

When, one is in a state of distressed mind, anger or hunger, the heat of the body will become more and at that state he should consume liquid food.

If he takes solid food under such conditions, it will cause improper digestion and related diseases.

During eating, one should take the sweet taste at first then he takes pungent, saline tastes with vegetables. Astringent taste, sour - curds and pickles will be consumed at last. This method of taking the six tastes will give the pleasure of eating.

Any alterations in taking six tastes will cause diseases.

The following foods are unsuitable and they may cause diseases of the physical constituents, which lead to indigestion and diseases of the stomach.

1. The food that causes abominate feeling or flatulence.
2. The food that has been charred or scorched by fire.
3. Food is not cooked suitably or hard foods, over dried, very cold food.
4. Foods cooked without properly removing the foreign bodies like small stones, sand, grass or husk, worms, hair etc.,
5. Dried cooked rice or cooked rice kept in water for a long time.
6. Reheated the already prepared foods.
7. Food that prepared with a lesser quantity of vegetables.
8. Food that is very hot and contains more salt.

Food that consume at irregular timings or at irregular intervals between the meals may cause severe diseases. And if one consumes the food beyond the level of his digestive fire, he will get innumerable diseases.

5. CONSTRAINT OF 14 NATURAL URGES

14 Natural urges are the indications of our body functions and these should not be obstructed forcibly.

1. Abaanan (Flatus air)

If one resists the flatus air completely or partially, he will inflict with the diseases of the chest, flatulence, constipation, and pricking sensation through out the body.

2. Sneezing

Kirukaran vayu which lodges with nose and is responsible for sneezing. Restriction of sneezing causes headache, and pain in the sense organs.

3. Urine

If one does not pass urine regularly, it causes obstruction in the urethral passage, ulceration in the urinary tract, joint pain and distension of the lower abdomen.

4. Faeces

Abana vayu is responsible for defaecation. If it is obstructed, its increased quantum pushes the stools. It also causes headache, pain in the thigh, constipation, discomfort and inability.

5. Yawning

If it is prevented it leads to poor digestion, tiredness and wilt of face.

6. Hunger 7. Thirsty

If hunger and thirst are not quenched, these lead to impairment of the functions of vital organs, tiredness and joint pain.

8. Cough 9. Rest (Tiredness)

If cough is controlled, it leads to violent cough, bad odour in the breath, heart diseases, abdominal pain and tiredness.

If one does not take rest properly, tiredness causes faintness and chills.

10. Sleep

If one does not sleep well daily, he may get headache, redness of eyes, impaired speech and hearing.

11. Vomiting

If vomiting is prevented forcibly, it leads to fever, itching, pallor, eye diseases and cough.

12. Tears

Constraint of tears causes eye diseases, ulcer in the head, and heart disease.

13. Semen

If semen is controlled, it leads to fever, diminution of urine, joint pain, and chest pain.

14. Breathing

Constraint of proper breathing leads to cough, flatulence and fever.

DIAGNOSTIC TOOLS IN SIDDHA SYSTEM

Siddha system has a unique diagnostic method to identify the diseases and their causes.

Envagai Thervu

“மெய்க்குறி நிறம் தொனி விழிநா இருமலம்

கைக்குறி”

- தேரையர்.

There are 8 tools of diagnosis.

1. Meikuri
2. Naa
3. Niram
4. Mozhi
5. Vizhi
6. Malam
7. Moothiram
8. Naadi

1. Mei kuri

By Meikuri, the following symptoms are observed. The temperature of the skin (heat or cold), sweating, numbness, fissures, thickening of hairs, hair falling, hair erection, ulcers, swelling, weight loss and weight gain.

2. Naa

Tongue colour (black, red, yellow, white), coating of tongue, excessive salivation, dryness, ulcer, gums, teeth, taste, mouth deviation, speech are noted.

3. Niram

Body colour (black, yellow, white, red, blue), flush, pallor, black colour in eyes and teeth are observed.

4. Mozhi

Pitch of voice (high, low, normal), hoarseness of voice, fluency, intelligence, articulation, character, breathlessness are observed.

5. Vizhi

Eyes easily reflect the pathological changes of the body. Size and shape, colour (red, yellow, pallor, blue, muddy), lacrimation, dryness, swelling of eyelids, ulceration, visual field, sharpness of vision, colour vision, inflammation (ulcer in conjunctiva, cornea, pupil) are keenly observed.

6. Malam

Colour (yellow, red, black, white, green), froth, solid or semisolid or liquid, quantity, odour are noted.

7. Moothiram

Urine is observed under 2 headings

1. Neer kuri
2. Nei kuri

7.1. Neer kuri

Collection of Urine for Testing

Before the collection of urine for testing, one should take supper consisting of all the six tastes at the regular time based on one's digestive fire. After a sound overnight sleep, urine should be collected in a closed glass ware and the test should be done before 90 minutes from dawn. This rule is relaxable in severe cases.

General Features of Urine

Niram (Colour)

Manam (Odour)

Nurai (Froth)

Edai (Specific gravity)

Enjal (Quantity)

7.2 . Nei kuri

A drop of oil is dropped at the centre of oil bowl without any shaking. It should be ensured that the direct sunlight does not fall on it, but bright light is necessary for observation. And it is not disturbed by the wind.

The changes of the oil drop in Urine suggest the diagnosis and condition of the patient.

General Nature of Urine in Oil Examination

If the oil drop takes the shape of a shake, it indicates Vali disease. If it spreads like a ring it indicates Azhal disease. If it stands like a pearl it indicates Iya disease. If the oil drop sinks in the urine.

If all features of the three humors are seen together in the urine it suggests derangement of all three humors. If the oil drop spreads fast, it will indicate Asaathiayam.

8. Naadi

Naadi is very important tool. Diagnosis of the disease by assessing Naadi gives a best way to treat the disease. Vali Naadi is felt in tip of Index finger. Azhal Naadi is felt in tip of Middle finger. Iya Naadi is felt in tip of Ring finger.

Manikkadai Nool

Manikkadai nool is another important diagnostic tool. It is a measurement which is done 4 inches from the wrist by thread. The measurement denotes the signs and symptoms of the disease. In severe diseases, it indicates in which day the patient died.

AIM AND OBJECTIVES

The importance of medical science is well appreciated when man suffers by disease. The Siddha system of medicine gives both curative and preventive aspects of the disease.

Diseases of the nervous system are fairly common in pediatrics than adults. Neurological symptoms are also frequently encountered in a wide variety of systemic illnesses.

Accurate early diagnosis in children is likely to be more rewarding than in adults

Because the early detection of this disease is very much useful to protect our future assets, i.e. children. This can give a healthy and victorious India as we believe to reach.

The aim of this study is to evaluate the etiology and pathology of Vachchiraroopam through 96 basic principles. This gives guide to diagnose and treat the disease in successful manner.

The following objectives are carried to fulfill the aim.

- To find out the etiology of this disease.
- To establish the pathological view of this disease.
- To keenly observe the changes of the Envagai Thervu for attain diagnosis.
- To collect Siddha literary evidences as well as the Modern theories.
- To give a way to do more research works on this disease.

ELUCIDATION ABOUT VACHCHIRAROOPAM

Vachchiraroopam is one of the Vatha diseases which is described in Yugi Vaithiya Sinthamani in 302nd stanza. It is as follows.

வச்சிரரூபம்

“விதியான பிடரியைத்தான் மிகவி முத்து
மிகக்கண்க ளசைவில் லாமலே நோக்கித்
ததியான குறோக்கைபோற் சத்தம் பெற்றுத்
தலைநோவு மிகுதியாய் நடுக்க லுற்று
குதியான நரம்பிழுத்துத் திமிருண் டாகிக்
கொட்டாவி சோம்பலாய்க் கூச்ச லுண்டாய்
வதியான மலசலமுஞ் சுறுக்கி வீழும்
வச்சிரரூ பந்தன்னின் வகையி தாமே”.

- யுகி வைத்திய சிந்தாமணி

வச்சிரம் - வைரமணி

ரூபம் - வடிவம்

Vachchiraroopam denotes the stiffness of the body.

பொருள்:

பிடரி	- Occiput (The back part of the head)
இழுத்தல்	- Retraction (The act of drawing back)
குறோக்கை போற் சத்தம்-	Snoring like voice
தலைநோவு	- Headache
நடுக்கல்	- Tremulousness (Shaking slightly)
நரம்பு	- Muscles
திமிர்	- Stiffness

சோம்பல்	- Lethargy
கூச்சல்	- Making noise due to irritation
சுறுக்கி	- Diminution

“விதியான பிடரியைத்தான் மிகவி முத்து”

Retraction of head is an extreme degree of cervical rigidity which represents reflex protective spasm.

“மிகக்கண்க ளைசவில் லாமலே நோக்கித்”

Fixed gaze which means look steadily in one direction. The patient can't see freely in all directions because the field of vision is contracted all round the periphery.

“ததியான குறோக்கைபோற் சத்தம் பெற்றுத்”

Snoring like voice which means Nasal twang.

Twang means the quality of speech sound which produced through both the nose and the mouth. It is produced due to paralysis of the soft palate.

“தலைநோவு மிகுதியாய் நடுக்க லுற்று”

There will be severe headache and tremulousness.

“குதியான நரம்பிழுத்துத் திமிருண் டாகிக்”

Muscle spasm and stiffness which is produced throughout the body and it will make the appearance of the body rigid.

“கொட்டாவி சோம்பலாய்க் கூச்ச லுண்டாய்”

The patient has symptoms such as yawning, lethargy and making noise due to irritation (Meningeal cry).

“வதியான மலசலமுஞ் சுறுக்கி வீழும்”

Diminution of faeces and urine reflect the severity of the disease becoming worst.

“வச்சிரரூ பந்தன்னின் வகையி தாமே”

These are the features of the disease Vachchiraroopam.

The Summary of Clinical Features of Vachchiraroopam are as follows.

In Vachchiraroopam, inflammation of the meninges causes head retraction which is due to spasm of extensor muscles of the neck because of irritation of nerve roots.

Fixed gaze is due to Papilloedema. Snoring like voice is the manifestation of paralysis of muscles of soft palate.

Intense headache occurs due to stretching stimulus to the blood vessels of the meninges.

Tremulousness occurs due to inflammatory toxic substances circulating in blood which affects the hypothalamic temperature control center.

Muscle spasm and stiffness occurs due to inflammation of spinal meninges. Yawning, lethargy, making noise due to irritation are due to Delirium. Diminution of faeces and urine are due to Sacral radiculopathy.

PATHOLOGICAL VIEW OF DISSERTATION TOPIC IN SIDDHA ASPECT

In Vachchiraroopam, both Uyir and Udal thathukkal are affected.

UYIR THATHUKKAL

INCREASED IYAM

Iyam is predominantly affected, because head is one of the dwelling places of Iyam. It is revealed by the following poetry lines.

“கூறினோம் சிலேற்பனமது சமான வாயு
கொழுகியடா சுழிமுனையைப் பற்றி விந்தில்
சீறியே சிரசிலாக் கிணையைச் சேர்ந்து
சிங்குவை அண்ணாக்கு நிணமச்சை ரத்தம்
மீறியே நிறங்கோணம் நரம்பெ லும்பில்
மேவியதோர் மூளைபெருங் குடலிற் கண்ணில்
தேறியதோர் பொருந்திடங்க ளெல்லாஞ் சேர்ந்து
சிலேட்டுமமது வீற்றிருக்குந் திடங் கண்டாயே.”

- சதக நாடி

1. Ali Iyam (Avalambagam)

It is increased and exhibits the symptoms like dyspnea on exertion.

2. Neerppi Iyam (Kilethagam)

In Vachchiraroopam, it is increased and results reduced appetite.

3. Suvaikaa Iyam (Pothagam)

It is increased and results sweet taste appreciated in tongue. It is revealed by the following poetry lines.

“ சேத்தும மெழுந்திருக்கிற் தித்திப்பு நாவி லேறும் ”

- அகத்தியர் நாடி.

4. Niraivu Iyam (Tharpagam)

It is increased in this disease which is due to inflammatory changes in the Cerebrospinal Fluid.

5. Ontri Iyam (Santhigam)

It is increased and causes inability to flex the joints.

INCREASED VALI

1. Uyirkkaal (Praanan)

It is increased and results dyspnea on exertion.

2. Keelnokkukkaal (Abaanan)

In Vachchiraroopam, it is increased and exhibits the symptoms like diminution of faeces and urine.

3. Melnokkukkaal (Udhaanan)

It is increased and causes snoring like voice.

4. Paravukaal (Viyaanan)

It is increased and exhibits the symptoms like pain and tenderness in neck.

5. Nadukkaal (Samaanan)

It is increased in this disease and results reduced appetite.

6. Vaanthikkaal (Naahan)

In Vachchiraroopam, it is increased and causes reduced intellectual functions.

7. Vizhikkaal (Koorman)

It is increased and it causes contraction of field of vision.

8. Thummikkaal (Kirukaran)

It is increased and results coated tongue and reduced appetite.

9. Kottavikkaal (Devathathan)

In Vachchiraroopam, it is increased and results lethargy and tiredness.

DECREASED AZHAL

1. Aakkanal (Anar pitham)

It is decreased and causes reduced appetite.

2. Vannayeri (Ranjaga pitham)

It is decreased and exhibits pallor ness due to anaemia.

3. Aattralangi (Saathaka pitham)

It is decreased because of the ability to do works disturbed in Vachchiraroopam.

4. Nokkazhal (Aalosaka pitham)

In Vachchiraroopam, it is decreased and exhibits the symptoms like contraction of field of vision.

UDAL THATHUKKAL

In Vachchiraroopam, Udal thathukkal are deranged.

Saaram - Sluggishness

Senneer - Pallor ness

Oon - Fatigue

Kozhuppu - Emaciation

Enbu - Hair falling

Moolai - Stiffness of the body and Diminution of urine.

In Vachchiraroopam, primarily Iyam and secondarily Vali are increased and Azhal is decreased. This Mukkutra nilaigal leads to derangement of Udal thathukkal.

PATHOLOGICAL VIEW OF THE DISSERTATION TOPIC IN MODERN ASPECTS

“விதியான பிடரியைத்தான் மிகவிழுத்து”

In Vachchiraroopam, Head retraction is the cardinal feature. Head retraction is an extreme degree of cervical rigidity brought about by spasm of extensor muscles of neck.

This is caused by irritation of the nerve roots during their passage through the subarachnoid space which is infected.

“மிகக்கண்களசைவில்லாமலே நோக்கித்”

This symptom is the manifestation of increased C.S.F. pressure in the Optic disc.

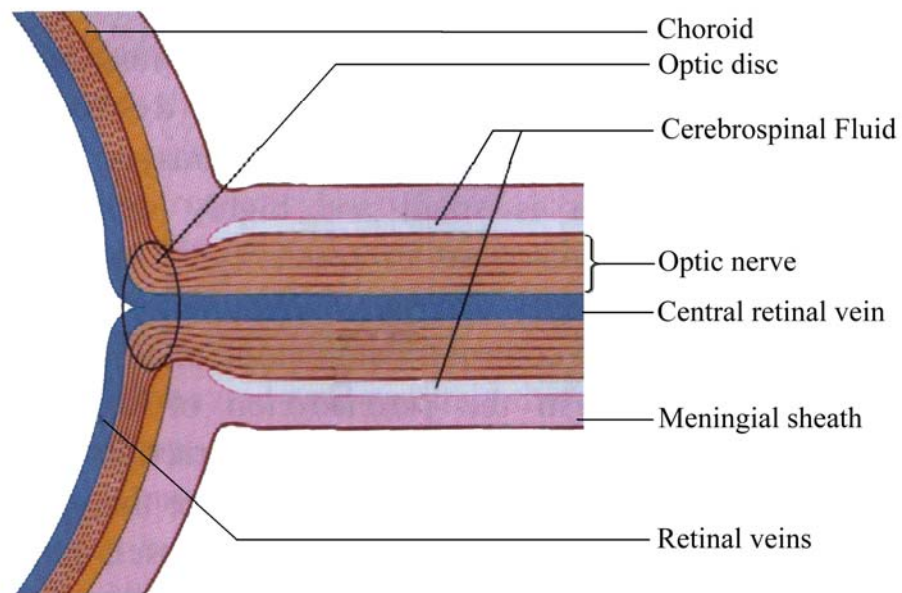
The normal pressure in the C.S.F. system when one is lying in a horizontal position averages 130 mm of water (10 mmHg).

The C.S.F. pressure rises considerably when infection occurs in the cranial vault.

In this condition, large numbers of white blood cells suddenly appear in the C.S.F. and they can cause serious blockage of the small absorption channels through the arachnoid villi. This also sometimes elevates the C.S.F. pressure to 400 to 600 mm of water (about 4 times normal).

High C.S.F. pressure causes edema of the optic disc.

Anatomically the arachnoid mater and the pia mater extend forwards into the orbit and cover the Optic nerve. So the subarachnoid space also surrounds the optic nerve.



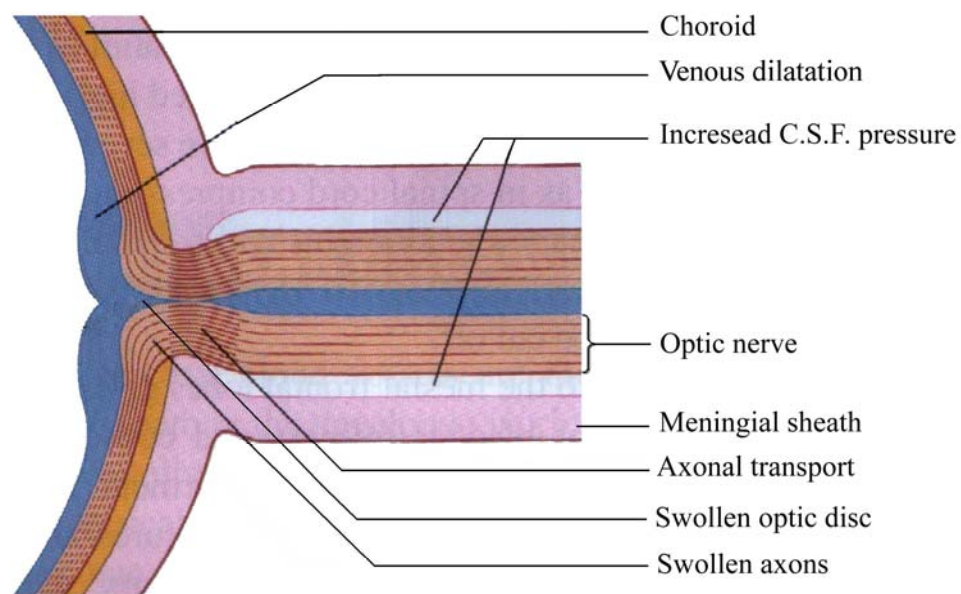
NORMAL OPTIC DISC

Elevation in Cerebrospinal fluid System Pressure

When the pressure rises in the Cerebrospinal fluid system due to infection or inflammation, it also rises inside the optic nerve sheath, a few millimeters behind the eye and then passes along with the optic nerve fibers into the eye itself. Therefore,

1. High C.S.F. pressure pushes fluid first into the optic nerve sheath and then along the spaces between the optic nerve fibers to the interior of the eyeball,

2. The high pressure decreases outward fluid flow in the optic nerves, causing accumulation of excess fluid in the optic disc at the center of the retina; and
3. The pressure in the sheath also impedes flow of blood in the retinal vein, thereby increasing the retinal capillary pressure throughout the eye, which results in still more retinal edema.



MECHANISM OF OPTIC DISC OEDEMA (PAPILLOEDEMA)

The tissues of the optic disc become for more edematous than the remainder of the retina and swells into the cavity of the eye. The swelling of the disc can be observed with an Ophthalmoscope and is called as Papilloedema

So the field of vision is contracted all round the periphery which is called as **Concentric Scotoma**. The patient can't see freely in all directions.

“ததியான குறோக்கை போற் சத்தம் பெற்று”

Snoring like voice which means **Nasal twang**.

It is produced due to **Paralysis of the Soft Palate**.

The muscles of the soft palate (except the tensor palati which is supplied by the mandibular nerve) are supplied by the Pharyngeal plexus.

The fibres of this plexus arise from the upper part of the Inferior ganglion of the Vagus, and contain chiefly the fibres of the cranial accessory nerve.

The Inferior ganglion of the Vagus nerve which is cylindrical and lies near the base of the skull. It is involved during the inflammation of meninges. It causes paralysis of soft palate which produces nasal twang.

“தலைநோவு மிகுதியாய்”

This may be the first symptom which calls the patient to physician.

Due to inflammation of the meninges, including the sensitive areas of the dura, the sensitive areas around the venous sinuses and stretching stimulus to the blood vessels of the meninges can cause headache.

The extreme headache refers over the entire head.

“நடுக்க லுற்று”

Tremulousness occurs due to inflammatory toxic substances circulating in blood which affects the hypothalamic temperature control center.

When the hypothalamic temperature control center is suddenly changed from the normal level to higher as a result of tissue destruction due to inflammation, the body temperature usually takes several hours to reach the new temperature level.

Because the blood temperature is now less than the set point of the hypothalamic temperature controller, the usual responses that cause elevation of body temperature.

During this period, the person experiences tremulousness.

Tremulousness can continue until the body temperature reaches the higher hypothalamic set point level.

“குதியான நரம்பிழுத்துத் திமிருண் டாகிக்”

Due to inflammation of the Spinal meninges, the subarachnoid space of the spinal cord is distended.

The spinal nerve roots are stretched. These cause muscle spasm and stiffness.

“கொட்டாவி சோம்பலாய்க் கூச்ச லுண்டாய்”

During inflammatory process, many tissue products are released from damaged tissue. These are histamine, bradykinin, serotonin, prostaglandins, several different reaction products of the blood clotting system and multiple substances called lymphokines that are released by sensitized T cells.

Necrosin is released from damaged tissues at the site of infection, which further damage the tissues locally and when it enters the general circulation, it damages organs elsewhere.

Circulating toxic substances cause Delirium. This usually takes the form of lethargy with disorientation and muddled thinking.

These may be associated with emotional disturbance such as anxiety, irritability or depression.

There may be a high pitched Meningeal cry due to severe headache.

“வதியான மலசலமுஞ் சுறுக்கி வீழும்”

Diminution of faeces and urine are due to Sacral radiculopathy.

Due to Sacral radiculopathy, the faeces arrives normally at the pelvic colon, but their final evacuation is not adequately performed. Fragmentary defaecation may takes place, i.e. Small amounts are passed, but much faeces are left behind in the rectum to continue distending it.

Due to Sacral radiculopathy, micturition is incompletely performed; i.e.large quantities of residual urine may be left in the bladder.

“வச்சிர ஁ருபந் தன்னின் வகையிதாமே”

These are the features of the disease Vachchiraroopam.

MODERN ASPECTS

MENINGES

The Brain and Spinal cord are surrounded by the three membranous coverings called the Meninges. The brain is very important but delicate organ.

The Meninges are

1. Outer Duramater
2. Arachnoid mater
3. Inner Piamater.

The dura mater is also frequently called the pachymeninx. The arachnoid and pia mater are collectively called the leptomeninges.

Between the arachnoid mater and the pia mater there is the subarachnoid space which contains Cerebrospinal fluid (C.S.F.). In relation to the dura mater there are a series of venous sinuses which drain intracranial structures including the brain.

DURA MATER

The dura mater is the thickest of the three meninges. It encloses the cranial venous sinuses, and has a distinct blood supply and nerve supply.

The Cerebral Dura Mater

The dura mater is the outermost, thickest and toughest membrane covering of the brain.

There are two layers of dura:

- a. An outer or endosteal layer which serves as an internal periosteum or endosteum or endocranium for the skull bones, and
- b. An inner or meningeal layer which surrounds the brain.

The meningeal layer is continuous with the spinal dura mater.

The two layers are fused to each other at all places, except where the cranial venous sinuses are enclosed between them.

The Endosteal Layer or Endocranium

The endocranium is continuous

- a. with the periosteum lining the outside of the skull or pericranium through the sutures and foramina, and
- b. with the periosteal lining of the orbit through the superior orbital fissure.

It provides sheaths for the cranial nerves. The sheaths fuse with the epineurium outside the skull. Over the optic nerve, the dura mater forms a sheath which becomes continuous with the sclera.

The Meningeal Layer

At places, the meningeal layer of dura mater is folded on itself to form partitions. It divides the cranial cavity into compartments which lodge different parts of the brain.

The folds are the:

- a. Falx cerebri
- b. Tentorium cerebelli
- c. Falx cerebelli
- d. Diaphragma sellae.

Spinal Dura Mater

Spinal dura mater is a thick, tough, fibrous membrane which forms a loose sheath around the spinal cord. It is continuous with the meningeal layer of the cerebral dura mater.

The spinal dura extends from the foramen magnum to the lower border of the second sacral vertebra; whereas the spinal cord ends at the lower border of first lumbar vertebra. The dura gives tubular prolongations to the dorsal and ventral nerve roots and to the spinal nerves as they pass through the inter vertebral foramina.

Subdural Space

Subdural space is a capillary or potential space between the dura and the arachnoid, containing a thin film of serous fluid. This space permits movements of the dura over the arachnoid.

ARACHNOID MATER

The arachnoid mater is a thin transparent membrane.

Cerebral Arachnoid Mater

It loosely surrounds the brain without dipping into its sulci.

Spinal Arachnoid Mater

It loosely invests the entire central nervous system. Inferiorly it extends, like the dura, upto the lower border of the second sacral vertebra.

PIA MATER

This is a delicate membrane.

Cerebral Pia Mater

It closely invests the brain. It dips into sulci of the cerebrum.

The pia mater intracranially extends over the cranial nerves and fusing with their epineurium. Blood vessels entering the cerebrum are covered by the peri vascular sheath formed from pia mater.

The telachoroidea is an extension of pia mater into the ventricular system. Telachoroidea is invaginated by the blood vessels to form the choroid plexus. The choroid plexus secrete the **Cerebrospinal Fluid**.

Spinal Pia Mater

Spinal pia mater is thicker, firmer and less vascular than the cerebral pia mater, but both are made up of two layers.

- a. An outer epi – pia containing large vessels.
- b. An inner pia – gia or pia intima which is in contact with nervous tissue.

Optic Nerve is covered by dura, arachnoid and pia maters.

SUBARACHNOID SPACE

This is the space between the arachnoid and the pia mater. It surrounds the brain and spinal cord like a water cushion.

The spinal subarachnoid space is wider than the space around the brain.

It is widest below the lower end of the spinal cord where it encloses the Cauda Equina. It is traversed by a network of arachnoid trabeculae which give it a sponge like appearance.

It ends below at the lower border of the second sacral vertebra. The subarachnoid space contains C.S.F. and large vessels of the brain. Cranial nerves pass through the space.

The subarachnoid space in certain locations, they are dilated and called cisterns.

The main cisterns are,

- a. Cisterna pontis (Pontine cistern)
- b. Interpeduncular cistern (Basal cistern)
- c. Cerebello medullary cistern (Cisterna magna)

The cisterna pontis lies anterior to Pons and Medulla.

Interpeduncular cistern lodges circle of Willis. This cistern is due to the stretch of the arachnoid mater between the two cerebral peduncles.

Cerebello medullary cistern is situated posteriorly. The arachnoid mater makes projections into venous sinuses, called Arachnoid villi.

The Arachnoid villi especially well developed along the superior sagittal sinus. Collection of Arachnoid villi are called Arachnoid granulations (Pacchionion bodies).

Through the Arachnoid villi the cerebrospinal fluid is filtered into the venous blood. There are fibrous sheath connecting arachnoid and pia mater.

Cranial nerves are crossing through the subarachnoid space.

CEREBROSPINAL FLUID (C.S.F.)

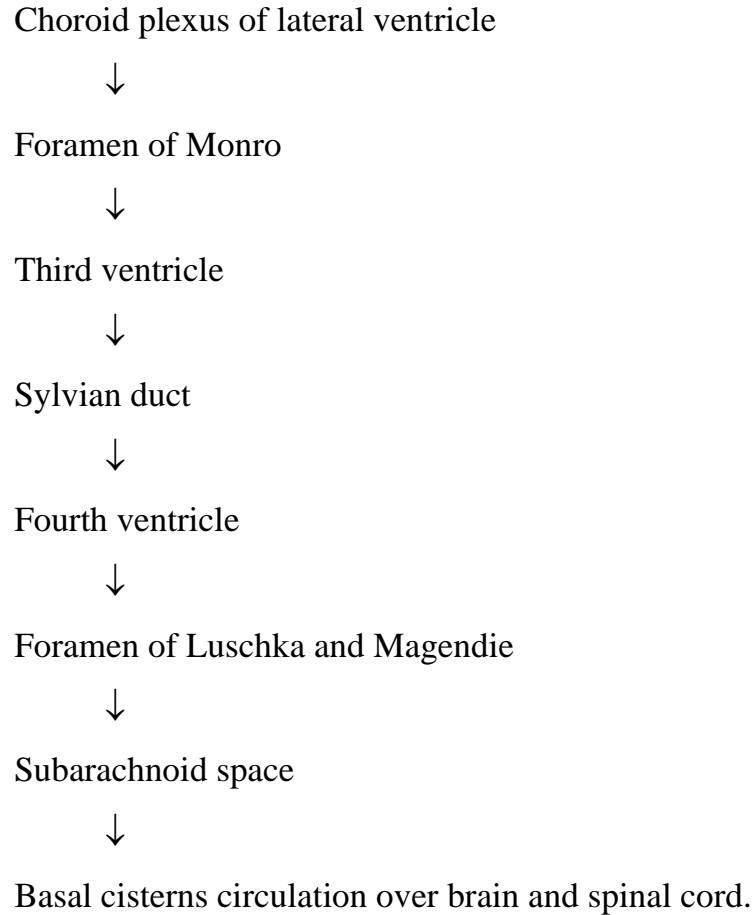
Cerebrospinal fluid is a clear and colourless watery liquid. It is a modified tissue fluid. It is contained in the ventricular system of the brain and in the subarachnoid space around the brain and spinal cord.

C.S.F. replaces lymph in the Central nervous system. The C.S.F. provides a fluid cushion which protects the brain from injury. It probably also helps to carry nutrition to the brain and to remove waste products.

SITE OF C.S.F. FORMATION

1. Choroid plexus of the lateral ventricle – 95%
2. Choroid plexus of the third and fourth ventricles
3. Perivascular spaces of the brain
4. Lymphatics around the roots and peripheral nerves.

CIRCULATION OF C.S.F.



ABSORPTION OF C.S.F.

1. C.S.F. is absorbed chiefly through the arachnoid villi and granulations, and is thus drained into the cranial venous sinuses.
2. It is also absorbed partly by the perineural lymphatics around the first, second, seventh and eight cranial nerves.
3. It is also absorbed by veins related to spinal nerves.

FUNCTIONS OF C.S.F.

1. Nutrition
2. Excretion
3. Shock absorption
4. Regulation of intra cranial pressure.

NORMAL C.S.F.

Colour	-	Clear as water
Volume	-	150ml (The whole volume of C.S.F. replaced several times a day)
Rate of Formation	-	0.3ml per minute
Specific gravity	-	1.005
Reaction	-	Alkaline
pH	-	7.33
Pressure	-	60-150mm of C.S.F. in supine and 200-250mm of C.S.F. in sitting position
Protein	-	20 to 40 mg%
Glucose	-	40 to 60 mg%
Chlorides	-	720 to 750mg%
Cells	-	not more than 5 lymphocytes/cumm.

The C.S.F. secreted by ventricle does not contain any cell. The lymphocytes are added when it flows in the spinal cord.

CHRONIC MENINGITIS

Meningitis refers to an inflammatory process of the leptomeninges and cerebrospinal fluid within the subarachnoid space.

Infectious meningitis can be broadly classified as

1. Acute pyogenic meningitis (usually bacterial)
2. Aseptic meningitis (usually viral)
3. Chronic meningitis (bacterial or fungal)

CHRONIC MENINGITIS

The condition is most commonly diagnosed when a characteristic neurological syndrome exists for longer than 4 weeks and is associated with a persistent inflammatory response in Cerebrospinal fluid (C.S.F.).

There are two principal types of chronic meningitis – one bacterial (tuberculous meningitis) and the other fungal (cryptococcal meningitis).

Both types cause chronic granulomatous reaction and may produce parenchymal lesions.

AETIOLOGY

Infection may reach the meninges by following routes:

1. Haematogenous route (most common) is used by pathogens that reach the circulating blood during a systemic infection, by septic emboli from suppurative lesions of lungs or infected valvular vegetations, or by way of contaminated blood.

2. Local extension can occur secondary to an established infection in an airsinus (most of the the mastoid or frontal), an infected tooth, or a surgical site in the cranium or spine causing osteomyelitis, bone erosion, and propagation of the infection into the central nervous system.
3. Direct implantations of organisms may result from penetrating wounds, compound fractures of the skull, and neurosurgical procedures (such as ventricular shunts or lumbar puncture), and rarely from congenital neuro ectodermal defects.
4. Axonal transport - The peripheral nervous system can be a path of infection into the central nervous system, as occurs with certain viruses (eg: rabies, and herpes simplex).

Damage to nervous system may be the consequence of direct injury of neurons or glia by the organisms, microbial toxins, the effects of the inflammatory response, or immune mediated injury.

PATHO PHYSIOLOGY

C.S.F. produced by the choroid plexus of cerebral ventricles, exists through narrow foramina into the subarachnoid space surrounding the brain and spinal cord. It circulates around the base of the brain and over the cerebral hemispheres and is resorbed by arachnoid villi projecting into the superior sagital sinus.

C.S.F. flow provides a pathway for rapid spread of infections and malignant processes over the brain, spinal cord and cranial and spinal nerve roots. Spread from the subarachnoid space into brain parenchyma may occur via the arachnoid cuffs that surround blood vessels that penetrate brain tissue (Virchow – Robins's space). Virchow – Robins's space is potential spaces surrounding blood vessels for a short distance as they enter the brain.

The cellular response of the nervous system to invading pathogens is basically similar to inflammation elsewhere in the body.

The capsular K1 antigen seems to be of particular importance. It is assumed that offending organisms lodge in the choroid plexus, producing acute plexitis and subsequently spread into ventricular fluid to reach the subarachnoid space.

Nociceptive fibers of the meninges are stimulated by the inflammatory process. Purulent exudate appears as creamy streaks on sulcal cisterns and forms a thick film around the spinal cord, especially over its dorsal aspect.

The ventricular fluid is turbid. The choroid plexus and the ependymal lining are covered by pus.

During the first 2 to 3 days the exudates are composed entirely of polymorphonuclear leukocytes, followed by lymphocytes and macrophages and then by plasma cells and fibroblasts.

All are largely confined to the subarachnoid space and extend only for short distances into the Virchow – Robins's spaces of the penetrating cortical vessels and subependymal venules.

Cognitive and behavioral changes during the course of chronic meningitis may also result from vascular damage, which may similarly produce seizures, stroke or myelopathy.

Inflammatory deposits seeded via C.S.F. circulation are often prominent around the brainstem and cranial nerves and along the undersurface of the frontal and temporal lobes.

Such cases, termed basal meningitis, often present as multiple cranial neuropathies with visual loss (Cranial Nerve II), facial weakness (C.N. VII), hearing loss (C.N. VIII), diplopia (C.N. II, IV, VI), sensory or motor abnormalities of the oropharynx (C.N. IX, X, XII), decreased olfaction (C.N. I), or facial sensory loss and masseter weakness (C.N. V).

If the inflammation is not rapidly controlled, the exudate may become basilar and fibrotic adhesions of the arachnoid, particularly in the basal cisterns and along the sagittal fissure, impede the freeflow of C.S.F. and cause hydrocephalus.

CAUSES OF CHRONIC MENINGITIS

Infectious Causes

1. Bacterial

- a. Partially treated acute pyogenic infections
- b. *Mycobacterium tuberculosis*
- c. Syphilis (secondary, tertiary)
- d. Parameningeal infections

2. Fungal

- a. *Cryptococcus neoformans*
- b. *Candida albicans*
- c. *Histoplasma capsulatum*

3. Viral

- a. Mumps
- b. Echovirus
- c. H.I.V.
- d. Herpes simplex

4. Protozoal

- a. Trypanosomiasis
- b. *Toxoplasma gondi*

Non Infectious Causes

1. Malignancy – Risk factors - metastatic carcinoma of breast, lung, stomach or pancreas, melanoma, lymphoma, leukaemia, meningeal sarcoma.
2. Primary inflammation C.N.S. sarcoidosis
3. Systemic lupus erythmatosis
4. Chemical irritation from craniopharyngioma or epidermoid.

TUBERCULOUS MENINGITIS

In C.N.S. Tuberculous meningitis is the most common form; tuberculoma occurs less frequently and present as mass lesions.

PATHOGENESIS

Tuberculous meningitis is assumed to be caused by release of the pathogen into the subarachnoid space from small tuberculomas, Rich's foci.

These foci are difficult to identify, purportedly occurring anywhere in the neuraxis, notably the cortex.

Tuberculous meningitis may also develop in the course of miliary tuberculosis.

PATHOLOGY

The meninges over the surface of the brain and the spinal cord are cloudy and thickened, but the process is usually most intense at the base of the brain.

A thick collar of fibrosis may form around the optic nerves, cerebral peduncles, and basilar surface of the pons and midbrain.

The ventricles are moderately dilated and the ependymal lining is covered with exudates or appears roughened (granular ependymitis). Minute tubercles may be visible in the meninges, choroid plexus and cerebral parenchyma.

On microscopic examination, the exudates in the thickened meninges are composed chiefly of mononuclear cells, lymphocytes, plasma cells, macrophages, and fibroblasts with occasional giant cells. The inflammatory process may extend for a short distance into the cerebral substance where microscopic granulomas may also be found.

Proliferative changes are frequently seen in the inflamed vessels of the meninges, producing a panarteritis. These arteritic changes may lead to thrombosis of the vessel and cerebral infarcts.

TUBERCULOMA

A tuberculous abscess in the brain is called tuberculoma which may be associated with meningitis. When tuberculosis was rife, tuberculoma of the brain were common, especially in children, and were found most often in the cerebellum.

Tuberculous abscesses in the brain are often multiple. They may be several centimeters in diameter, causing significant mass effect.

Microscopically, there is usually a central core of caseous necrosis surrounded by typically tuberculous granulomatous reaction and calcification may occur in inactive lesions.

CLINICAL FEATURES

Although tuberculous meningitis may occur at any age, it is most common in childhood and early adult life.

The onset is usually subacute, with headache, vomiting, fever, bursts of irritability, and nocturnal wakefulness as the most prominent symptoms.

The headache becomes progressively more severe. The pain often causes the children to emit a peculiarly shrill cry (**Meningeal cry**) a high pitched scream.

The patient becomes drowsy and at times delirious, but lucid intervals, even up to a late stage of the illness, are characteristic.

Signs of Meningeal Irritation

Cervical Rigidity (Neck Stiffness)

It is observed by the observer placing his hand beneath the patient's occiput and endeavouring to flex the head so as to bring the chin towards the chest.

There is resistance due to spasm of the extensor muscles of the neck, and an attempt to overcome, this causes pain.

Head Retraction

Head retraction is an extreme degree of cervical rigidity brought about by spasm of extensor muscles.

Flexion of the neck causes a rise in the C.S.F. pressure in the cisterna magna. When the meninges are inflamed this is painful; neck stiffness and head retraction represent reflex protective spasm.

Kernig Sign

To elicit Kernig's sign one knee is extended with the hip fully flexed; when positive there is pain due to spasm of the hamstring muscles and limitation of extension.

Brudzinski Sign

Brudzinski's sign consists first of spontaneous flexion of the knees and hips on attempted neck flexion and secondly spontaneous flexion of one leg when the other is flexed passively.

These signs result from the presence of inflammatory exudates around the roots in the lumbar theca.

Other Signs

The initial irritability is gradually replaced by apathy, confusion, lethargy, and stupor.

Papilloedema, cranial nerve palsies, and focal neurological signs are common in the late stages of the disease. The temperature, which is only

moderately elevated (100 to 102⁰F) in the early stage, rises to high levels before death.

Involvement of cranial nerves may give ptosis, diplopia, facial weakness, deafness, or dysphagia.

Retention of urine may be followed by incontinence of urine, less often of faeces. Constipation is usual.

Injury may occur to motor and sensory nerve roots as they traverse the subarachnoid space and penetrate the meninges.

These cases are present as multiple radiculopathies, with combination of radicular pain, sensory loss, motor weakness, and sphincter dysfunction. Meningeal inflammation can encircle the cord, resulting in myelopathy.

COMPLICATIONS

Acute Complications

1. Hydrocephalus
2. Cerebral infarction
3. Cranial nerve palsies
4. Convulsions
5. Fluid and electrolyte disturbances and
6. Bed sores.

Chronic Complications

1. Obstructive hydrocephalus
2. Optic atrophy
3. Subdural effusions
4. Diffuse or localized spinal arachnoiditis
5. Spinal cord compression and
6. Development of tuberculoma in the brain and spinal cord.

DIAGNOSIS

C.S.F. Analysis

The diagnosis of tuberculous meningitis can be established by recovery of the organisms from the C.S.F..

The C.S.F. findings are, Increased pressure, slightly cloudy or ground glass appearance of the C.S.F. with formation of a clot on standing, Moderate pleocytosis of 25 to 500 cells / cu mm with lymphocytes as the predominating cell type, Increased protein content, Decreased sugar content, a negative serological test for syphilis or streptococcal antigen and absence of growth when the C.S.F. is inoculated on routine culture media.

COHEN'S LAW OF MENINGITIS (1929)

Substances which are more in C.S.F. than blood diminish in meningitis and substances which are less in C.S.F. than blood increase in meningitis (except sugar which is low in meningitis because it is used by the organism and is also required for the increased metabolism of the brain).

Protein, Sugar, Cholesterol, Urea, Calcium and Phosphorus are less in C.S.F. than blood.

Chlorides and Magnesium are more in C.S.F. than blood.

Antibodies, Enzymes, Penicillin and Streptomycin are never seen in C.S.F. as they don't cross the blood- brain barrier.

C.T. or M.R.I. Scan of the brain

C.T. or M.R.I. of the brain in Tuberculous meningitis, the exudates which is frequently seen in the Basal cisterns, tends to be thick and adhesive.

Communicating hydrocephalus may result from obstruction at the level of the basal cisterns. Vascular involvement of the arteries at the Base of the brain or Sylvian fissures may result from vasculitis and surrounding meningeal inflammation.

On Non contrast C.T. or M.R.I. studies, the Basal cisterns and Sylvian fissures may be partially or completely obscured by the presence of purulent exudates and inflammatory tissue, which appears to have a similar density or signal intensity.

On Contrast - enhanced C.T. or M.R.I. studies, the involved cisterns show intense enhancement.

M.R.I. studies are more sensitive than C.T. scans for detection of Tuberculous meningitis.

On Contrast - enhanced C.T. scans, Tuberculomas may present a pattern of Ring like enhancement or, less likely, areas of nodular enhancement or irregular non homogeneous enhancement.

A central nidus of calcification with surrounding ring like enhancement known as the Target sign is suggestive of Tuberculoma.

Other Diagnostic Aids

It includes a thorough search for a primary focus, including Radiographs of the Chest and Tuberculin skin tests.

EVALUTION OF THE DISSERTATION

MATERIALS AND METHODS

The clinical study on Vachchiraroopam was carried out at the Post Graduate Noi Naadal out patient Department of Government Siddha Medical College Hospital, Palayamkottai.

Limitations

Now-a-days the prevalence of the Vachchiraroopam in the population is very rare. Hence the possibility of selecting at least Twenty sample is less. The Study sample taken in this study is limited to Five cases. Besides, only Five cases were available during this study period.

Case selection and Supervision

Cases were selected with clinical features of Vachchiraroopam as mentioned in Yugi Vaithiya Sinthamani. Eight cases of similar symptoms of Vachchiraroopam were taken from, The Brain and Spine centre, South Bye Pass Road, Vannarpettai. And One case was taken from Muthamil Hospital, 47, Thiruvananthapuram Road, Palayamkottai, and One case from Krishna Maternity Home and Pediatric Centre, North High ground Road, Palayamkottai.

From which Five typical cases of Vachchiraroopam were selected and were followed by the author whose work was under the close supervision of

the faculties and Head of the Department of Post Graduate, Noi Naadal Department.

EVALUTION OF CLINICAL PARAMETERS

The cases were subjected to careful scrutiny, which involved history taking and clinical examination.

- Detailed history of present and past illness
- Treatment History
- Family and personal history
- History of extramarital contact
- Socio economic status
- Food habits

were noted. All the clinical features were carefully examined.

CLINICAL FEATURES OF VACHCHIRAROOPAM

1. Head retraction
2. Fixed gaze
3. Snoring like voice (Nasal twang)
4. Severe Headache
5. Tremulousness
6. Muscle spasm and stiffness
7. Yawning, lethargy and making noise due to irritation
8. Diminution of Faeces and Urine

STUDY ON SIDDHA CLINICAL DIAGNOSIS

Modes of investigating the cases which are carried out to find the deranged Uyir and Udal thathukkal by assessing Envagai thervu.

The Clinical Investigations

For further detailed study, Modern investigatory parameters were used. The following laboratory investigations were done in these cases.

Haematology

1. Total count of W.B.C.
2. Differential count of W.B.C.
3. Haemoglobin
4. Erythrocyte Sedimentation Rate

Bio-Chemistry

1. Blood Sugar
2. Blood Urea
3. Serum creatinine
4. C-Reactive Protein
5. V.D.R.L. Test
6. E.L.I.S.A. Test for H.I.V.

Urine Analysis

1. Albumin
2. Sugar
3. Deposits

Skin Test

Mantoux test

Other Tests

1. Chest X-ray P.A. view
2. C.T. or M.R.I. Scan of Brain
3. C.S.F. Analysis

OBSERVATION AND RESULTS

Results were observed with respect of the following aspects.

1. Age and Sex reference
2. Mukkutram
3. Udal thathukkal
4. Envagai thervu
5. Clinical features
6. Laboratory investigations

Statistical Tools Applied

For analysis and inferences the following statistical test were used.

They are

1. Student's 't' test
2. Odd's ratio.

STATISTICAL ANALYSIS AND INFERENCES

Age

The study subjects were classified according to their age and sex, and tabulated in the below table.

Table No: 2

Age and Sex of Vachchiraroopam cases

S. No.	Age Group	Sex		Total
		Male	Female	
1	0 – 9	1	-	1
2	10 – 19	1	2	3
3	20 – 29	1	-	1
	Total	3	2	5
	Mean	15.3	18.5	16.6
	S.D.	9.9	2.1	7.3
	T	0.48		
	P	P>0.05		
Normal Range of age at 95%		2 to 31.2 years		

From the above analysis, the incidence of the Vachchiraroopam may occur among the population of 2 years to 31.2 years of age. But there is no significant difference of age is noticed between sexes ($t = 0.48$, $P > 0.05$).

Mukkutram

The Mukkutram namely Vali, Azhal and Iyam have been classified among the study subjects and furnished in the below mentioned table.

Table No: 3

Percentage distribution of Mukkutram components with types

Components of Mukkutram	Types	Affected		Changes	Survived among affected	
		No.	%		No.	%
Iyam↑ed n = 5	Ali Iyam [Avalambagam]	5	100	Dyspnea on exertion	3	60
	Neerppi Iyam [Kilethagam]	5	100	Reduced appetite	3	60
	Suvaikaan Iyam [Pothagam]	5	100	Sweet taste appreciates in tongue	3	60
	Niraivu Iyam [Tharpagam]	3	60	Burning sensation in eyes	2	67
	Ontri Iyam [Santhigan]	2	40	Inability to flex the joints	0	0
Vali ↑ed n = 5	Uyirkkaal [Praanan]	5	100	Dyspnea on exertion	3	60
	Keelnokkukkaal [Abaanan]	5	100	Diminution of urine and feaces, Constipation.	3	60
	Paravukaal [Viyaanan]	5	100	Pain and tenderness in neck	3	60
	Nadukkaal [Samaanan]	5	100	Reduced appetite	3	60
	Vaanthikkaal [Naahan]	2	40	Reduced intellectual functions	0	0
	Vizhikkaal [Koorman]	2	40	Contraction of field of vision	0	0
	Thummikkaal [Kirukaran]	5	100	Reduced salivary secretion and reduced appetite	3	60
	Kottavikkaal [Devathathan]	5	100	Tiredness	3	60
Azhal↓ed n = 5	Aakkanal [Anarpitham]	5	100	Reduced appetite	3	60
	Vannayeri [Ranjakapitham]	5	100	Pallor ness	3	60
	Aatralangi [Saathakapitham]	5	100	Difficulty in doing normal works	3	60
	Nokkazhal [Aalosakapitham]	2	40	Contraction of field of vision	0	0

From the above table, it is known that the types of Vali except Vizhikkaal and Vaanthikkaal are observed in all cases. The Vizhikkaal and Vaanthikkaal are observed in only 2 cases. Similarly in Azhal and Iyam, Nokkazhal in 2 cases and Niraivu Iyam in 3 cases and Ontri Iyam in 2 cases are observed in each respectively.

The percentage of occurrence of the above symptoms is 40% [Vizhikkaal and Nokkazhal]. The survival of the cent percent symptoms is 60%. Among the affected cases of Vizhikkaal and Nokkazhal, the survival is nil. The Vizhikkaal and Nokkazhal symptoms may be considered as Odd's of the severity of the disease. The following analysis shows the risk of death caused by the Odd's of Vizhikkaal and Nokkazhal by comparing the other symptoms by Odd's ratio analysis.

Table No: 4

The chance of survivorship among the affected Vizhikkaal and Nokkazhal subjects

Occurrence	Survivorship of Vizhikkaal and Nokkazhal affected cases		Total
	Died	Survived	
Present	2	0	2
Absent	0	3	3
Total	2	3	5

Odd's_{mod} ratio = 35

The risk of deranged Vizhikkaal and Nokkazhal is 35 times greater than the risk of other symptoms which is shown in the table under the components of Mukkutram in respect of death.

Udal Thathukkal

Udal thathukkal will maintain in the physiological functions of the body. The severity of the disease is assessed by derangement of Udal thathukkal.

Table No: 5

Derangement of Udal Thathukkal and severity of the disease

S. No.	Udal Thathukkal	No. of cases Studied	No. of cases Affected		Changes	Cases cured and survived among the affected	
			No.	%		No.	%
1	Saaram	5	5	100	Reduced appetite	3	60
2	Senneer	5	5	100	Pallor ness	3	60
3	Oon	5	5	100	Fatigue	3	60
4	Kozhuppu	5	5	100	Emaciation	3	60
5	Enbu	5	2	40	Hair falling	0	0
6	Moolai	5	2	40	Diminution of Urine	0	0




All the studied 5 cases were affected by the Udal thathukkal viz, saaram, seneer,oon and kozhuppu. Among them, death was occurred in 2 cases and only 2 cases had affection in the Enbu and Moolai. The death occurrence of affected Enbu and Moolai cases are cent percent. So the severity of the disease may be assessed by Udal Thathukkal namely Enbu and Moolai and treated as Odd's.

So the Odd's_{mod} ratio is 35. That means the risk of affected Udal Thathukkal namely Enbu and Moolai is greater than 35 times than the other Udal Thathukkal in respect of death.

Envagai Thervu

The following diagnostic tools show the alterations in pathological conditions.

Table No: 6
PICTURE OF ENVAGAI THERVU

S.No.	O.P.No.	Age/Sex	Naa	Niram	Mozhi	Vizhi	Sparisam	Malam	Moothiram		Naadi
									Neer kuri	Nei kuri	
1.	2323	17/F	A. [Maapadivu, Velluppu, Inippu suvai.]	N.A.	A. [Thazhntha oli]	A. [Velluppu, Erichchal]	A. [Migu veppam, Reduced sweating, Thodu vali]	A. [Sirutthal 1 / day]	A. [Reduced Enjal 3 / day]	Spreads fast	Iyavali
2.	16874	4/MC	A. [Maapadivu, Velluppu, Inippu suvai.]	N.A.	A. [Thazhntha oli]	A. [Velluppu, Erichchal]	A. [Thodu vali]	A. [Sikkal 1 /2 days]	N.A.	A Snake in a Pearl	Iyavali 
3.	19947	20/M	A. [Maapadivu, Velluppu, Inippu suvai.]	N.A.	A. [Thazhntha oli]	A. [Velluppu]	A. [Migu veppam, Reduced sweating, Thodu vali]	A. [Sirutthal 1 / day]	A. [Reduced Enjal 3 / day]	Spreads fast	Iyavali
4.	20333	22/M	A. [Maapadivu, Velluppu, Inippu suvai.]	N.A.	A. [Thazhntha oli]	A. [Velluppu, Erichchal]	A. [Thodu vali]	A. [Sikkal 1 /2 days]	N.A.	A Snake in a Pearl	Iyavali 
5.	17298	20/F	A. [Maapadivu, Velluppu, Inippu suvai.]	N.A.	A. [Thazhntha oli]	A. [Velluppu]	A. [Thodu vali]	A. [Sikkal 1 /2 days]	N.A.	A Snake in a Pearl	Iyavali 

A. - Affected, N.A. – Not Affected

Table No: 7**Envagai Thervu and Severity of the Disease**

S. No.	Envagai Thervu	No. of cases studied	No. of cases Affected		Changes	Cases cured and survived among the affected	
			No.	%		No.	%
1	Sparisam	5	5	100	Tenderness over neck	3	60
2	Naa	5	5	100	Pallor	3	60
3	Mozhi	5	5	100	Low pitched voice	3	60
4	Vizhi	5	5	100	Pallor, Contraction of field of vision	3	60
5	Malam	5	2	40	Diminution of faeces	0	0
6	Moothiram Neerkuri	5	2	40	Reduced Enjal	0	0
	Neikuri	5	2	40	Spreads fast	0	0
			3	60	Muthil Aravam	3	100
7	Naadi	5	5	100	Iyavali	3	60

Table No: 8

Nei kuri and Severity of the Disease

Observation result	Cases		survived among observed cases	
	No.	%	No.	%
A Snake in a Pearl	3	60	3	100
Spreads fast	2	40	0	0
Total	5			

The above table shows that the result of the Neikuri observation. Among the 5 cases studied, 3 cases are shown A Snake in a Pearl which works out 60 %. Similarly Spreads fast observation is observed in 2 cases which work out 40%. While comparing the survivorship of the above two observation, A Snake in a Pearl is cent percent survived. The observation of Spreads fast cases are cent percent not survived. So the second observation is may be considered as an indication of severity of the disease in respect of Neikuri observation.

All the studied 5 cases were affected which were reflected in Envagai thervu viz,Sparisam,Naa,Mozhi and Vizhi. Among them 2 cases were fatal. These 2 cases were affected which were manifested by Malam and Moothiram.

The mortality rate of affected Malam and moothiram cases are cent percent. So the severity of the disease may be assessed by affected Malam and Moothiram as Odd's.

So the Odd's_{mod} ratio is 35. That means risk of affected tools namely Malam and Moothiram is greater than 35 times than the other tools in respect of death.

Table No: 9

Manikadai Nool

S.No.	Viralkadai Alavu	No. of cases	Percentage [%]
1.	7¼	4	80
2.	7	1	20

The above table shows that the Viralkadi Alavu of the cases. Among the 5 cases, 4 cases (80%) have 7 ¼ Viralkadai Alavu. One case has 7 Viralkadai Alavu.

Clinical Features

The Constituents of clinical features are enumerated in following table.

Table No: 10
Study Subjects classified according to Clinical Features and their
Survivorship

S. No.	Clinical Features	No. of cases studied	Affected		Mortality among the affected	
			No.	%	No.	%
1	Head retraction	5	5	100	2	40
2	Fixed gaze	5	2	40	2	100
3	Severe headache	5	5	100	2	40
4	Tremulousness	5	2	40	2	100
5	Muscle spasm and stiffness	5	2	40	2	100
6	Yawning, lethargy and making noise due to irritation	5	2	40	2	100
7	Diminution of faeces and urine.	5	2	40	2	100

From the above table, the study subjects were analyzed based on the clinical features. The clinical features namely, Head retraction, severe headache were observed in cent percent of cases.

The remaining clinical features such as, fixed gaze, tremulousness, muscle spasm and stiffness, yawning, lethargy, and making noise due to irritation, diminution of faeces and urine were observed in 40% among the total cases studied. So the risk of fatality is 35 times greater in these cases.

Bio Chemical Investigations

Bio Chemical Investigations are necessary to assess the condition of the disease.

Table No: 12
Bio Chemical investigations of study subjects

S. No.	Name of the investigation	No. of cases	Observation	Result of observation	
				No.	%
1	C-reactive Protein	5	Positive	5	100
2	V.D.R.L.	5	Non reactive	5	100
3	E.L.I.S.A. Test for H.I.V.	5	Negative	5	100
4	E.S.R.	5	Raised	3	60
5	Hb	5	Reduced	5	100

The above table shows that the bio chemical investigations of the cases. All the 5 cases are having positive C - reactive protein and non reactive V.D.R.L. and negative H.I.V. Among the 5 cases, 3 cases (60%) have raised their E.S.R. In respect of Hb, cent percent of the cases have decreased their required level.

DISCUSSION

5 patients were selected for clinical study on Vachchiraroopam and all patients were undergone investigations by both Siddha as well as Modern parameters. The results observed on various headings were discussed for further diagnosis.

INTERPRETATION OF CLINICAL HISTORY

1. Age

This disease occurs mostly at Iya paruvam, i.e. the age group of first 33years and 4 months. The occurrence of this disease is increased during the period of first Eleven years and one month and ten days, i.e. Iyathil Iya paruvam.

The progression of disease may be stables at 11 to 22 years, i.e. Iyathil Azhal paruvam. This disease may leads to fatal at the age group of 22 to 33years and 4 months, i.e. Iyathil Vali paruvam.

According to Modern aspect, it is most common in Childhood and early Adult life. Similarly the observed 5 cases are come under this age group.

2. Sex

Both male and female are equally affected by this disease which is revealed by clinical study on Vachchiraroopam.

3. History of previous illness

The study revealed that one patient had past history of Pulmonary Tuberculosis at the age of 7 years.

DERANGEMENT OF UYIR THATHUKKAL AND UDAL THATHUKKAL

Mukkutram

1. Increased Iyam

Ali Iyam, Neerppi Iyam, Suvaikaan Iyam, Niraivu Iyam and Ontri Iyam are increased since of characters such as dyspnea on exertion, reduced appetite, sweet taste appreciated in tongue, burning sensation in eyes and inability to flex the joints .

2. Increased Vali

Uyirkkaal, Keelnokkukkaal, Paravukaal, Nadukkaal, Vaanthikkaal, Vizhikkaal, Thummikkaal and Kottavikkaal are increased since of characters such as dyspnea on exertion, diminution of faeces and urine, pain and tenderness in neck, reduced appetite, reduced intellectual functions, contraction of field of vision, reduced salivary secretions and tiredness.

3. Decreased Azhal

Aakkanal, Vannayeri, Aatralangi and Nokkazhal are decreased since of characters such as reduced appetite, pallor ness, difficulty in doing normal works and contraction of Field of vision.

Udal thathukkal

1. Saaram - Sluggishness.
2. Senneer - Pallor ness.
3. Oon - Weakness of sense organs.

- 4. Kozhuppu - Emaciation.
- 5. Enbu - Hair falling.
- 6. Moolai - Stiffness of the body and Diminution of urine.

INTERPRETATION OF ENVAGAI THERVU

1. Sparisam

All patients had tenderness over neck which may be due to head retraction.

2. Naa

On examination of the tongue, pallor was present in all patients because of reduced Haemoglobin level.

3. Mozhi

All patients had low pitched voice due to chronic illness.

4. Vizhi

The lower conjunctiva was pale in all patients because of reduced Haemoglobin level.

2 patients had contraction of Field of vision which was due to Papilloedema.

5. Malam

2 Patients had diminution of faeces because of Sacral radiculopathy.

3 Patients had constipation. This may be due to improper diet because of chronic illness.

6. Moothiram

2 patients had diminution of urine which was due to Sacral radiculopathy.

Neikuri

The Neikuri of 3 patients were **Muthil Aravam** and it is Theera kuri.

The Neikuri spreaded quickly in 2 patients and it denotes **Asaathiyam**.

7. Naadi

The Naadi observed in all patients was **Iyavali**.

MANIKADAI NOOL

The Viralkadai Alavu of 4 patients was 7 ¼ and one patient had 7 Viralkadai Alavu.

The indication of above measurements is Pitham Sirasil yaerum.

INTERPRETATION OF ALLIED PARAMETERS

1. C.T. or M.R.I. Scan of brain

C.T. or M.R.I. Scan of brain was showed the Thickened Meningeal enhancement over Basal cisterns and Sylvian fissure.

2. C.S.F. Analysis

C.S.F. pressure is increased. Its colour is clear, Cob-web or Spider-web coagulum is formed on standing overnight, cells are increased, polymorphs dominate in early stages, and lymphocytes dominate in later stages. Protein is increased. Sugar and Chloride levels are diminished.

3. Blood test

Total count of W.B.C. and differential count of W.B.C. had no significant changes.

E.S.R. was elevated in most of the patients.

Haemoglobin level was reduced in all patients due to chronic infection.

C-reactive protein was positive in all patients.

4. SKIN TEST

Mantoux test was positive in all patients.

HIGHLIGHTS OF DISSERTATION TOPIC

Vachchiraroopam has clinical features of head retraction, fixed gaze, snoring like voice, severe headache, tremulousness, muscle spasm and stiffness, yawning, lethargy, making noise due to irritation, diminution of faeces and urine. It is a chronic disease.

Iyam is predominantly affected in this disease. Because head is one of the dwelling place of Iyam.

If this primary affection is not treated promptly; it causes the affection of Vali.

The Naadi of all patients was Iyavali. This disease is caused mainly by derangement of Iyam and Vali. Owing to this affection, the curative process of this disease takes longer duration.

This Thontha Naadi [Iyavali] which is Theera Naadi, it may reveals the worsening state of the disease. Afterwards this Naadi may changes in to Sanni Naadi [Marana Naadi] due to derangement of Azhal.

According to Udal thathukkal, alterations upto Moolai causes death. In these cases, Neikuri spreads quickly which denotes Asaathiyam.

CONCLUSION

The clinical study of Vachchiraroopam is based on Siddha diagnostic methods as well as Modern parameters. It reveals that the clinical condition similar to chronic meningitis which is an infection of the central nervous system.

Envagai thervu guided to arrive proper diagnosis of the disease.

Biochemical examinations were done to assess the general condition of all patients.

C.T. or M.R.I. scan of Brain, C.S.F. analysis, Chest X-ray and Mantoux test were done to confirm the diagnosis.

The complications such as hydrocephalus, cerebral infarction, subdural effusions, development of tuberculoma in the brain and spinal cord will be developed when the clinical condition is not promptly treated.

So, early diagnosis and proper treatment are very essential to protect our people from this hazardous disease.

Seventy five percent of this disease can be diagnosed through Siddha diagnostic methods. Modern parameters will helpful in confirming the diagnosis.

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Table No : 11
Laboratory Investigations of study subjects

S.No.	O.P. No.	Age / Sex	Blood				E.S.R.		Hb gms	Bio-chemical Observations					Urine			C.T.Scan of Brain
			T.C. Cells/Cum m	P %	L%	E%	1/2 hr mm	1 hr mm		Sugar mgs% [R]	Urea mgs%	C- reactive Protein	V.D.R.L.	E.L.I.S.A. Test for H.I.V.	Alb.	Sugar	Dep.	
1	2323	17/F	10,600	57	40	3	16	32	8	77	29	Positive	Non reactive	Negative	Nil	Nil	NAD	Features of communicating hydrocephalus. Sequelae of Basal Meningitis
2	16874	4/MC	10,050	52	45	3	5	10	8	165	12	Positive	Non reactive	Negative	Nil	Nil	NAD	Sequelae of Basal Meningitis
3	19947	20/M	11,200	64	32	4	10	26	7	96	32	Positive	Non reactive	Negative	Nil	Nil	NAD	Basal Meningitis
4	20333	22/M	7,950	54	44	2	10	27	9	96	25	Positive	Non reactive	Negative	Nil	Nil	NAD	Basal Meningitis
5	17298	20/F	9,000	50	48	2	5	15	9	120	22	Positive	Non reactive	Negative	Nil	Nil	NAD	Left Occipital Tuberculoma

NAD - No Abnormal Deposits

P.G. - NOI NAADAL DEPARTMENT,
GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.
A Study to Diagnose VACHCHIRAROOPAM through Siddha
Diagnostic Methodology
SELECTION PROFORMA

1. O.P.No _____ 2. I.P. NO _____ 3. Bed No: _____ 4. S. No: _____ 5. Date: _____

6. Name: _____ 7. Age (Years):

--	--

 8. Sex:

M	F
---	---

9. Occupation: _____ 10. Income: _____/month

11. Address:

.....

.....

12. Complaints and duration:

.....

.....

.....

13. History of present illness:

.....

.....

.....

14. Past history:

.....

.....

15. Family History:

.....

.....

Habits		1.Yes	2.No	
16. Betel nut chewer	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
17. Tea	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
18. Coffee	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
19. Milk	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
20. Smoking	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
21. Alcohol	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
22. Food habits	:	V <input type="checkbox"/>	NV <input type="checkbox"/>	M <input type="checkbox"/> _____

GENERAL ETIOLOGY FOR VACHCHIRAROOPAM

	1. Yes	2.No	
23. Excessive intake of bitter, astringent and pungent	<input type="checkbox"/>	<input type="checkbox"/>	<hr/>
24. Sleeping in day time	<input type="checkbox"/>	<input type="checkbox"/>	<hr/>
25. Sleep disturbance at night	<input type="checkbox"/>	<input type="checkbox"/>	<hr/>
26. Starvation	<input type="checkbox"/>	<input type="checkbox"/>	<hr/>
27. Intake of Chill foods	<input type="checkbox"/>	<input type="checkbox"/>	<hr/>
28. Excessive sexual desire	<input type="checkbox"/>	<input type="checkbox"/>	<hr/>
29. Infections	<input type="checkbox"/>	<input type="checkbox"/>	

GENERAL EXAMINATION

30. Weight(kg) :

31. Temperature (°F) :

32. Pulse rate/minute :

33. Heart rate/minute :

34. Respiratory rate/minute :

35. Blood pressure(mmHg) :

		1. Yes	2.No	
36. Pallor	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
37. Jaundice	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
38. Cyanosis	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
39. Lymphadenopathy	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
40. Pedal edema	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
41. Clubbing	:	<input type="checkbox"/>	<input type="checkbox"/>	_____
42. Jugular vein pulsation	:	<input type="checkbox"/>	<input type="checkbox"/>	_____

VITAL ORGANS EXAMINATION

	1. Normal	2.Affected	
43. Heart	<input type="checkbox"/>	<input type="checkbox"/>	_____
44. Lungs	<input type="checkbox"/>	<input type="checkbox"/>	_____
45. Brain	<input type="checkbox"/>	<input type="checkbox"/>	_____
46. Liver	<input type="checkbox"/>	<input type="checkbox"/>	_____
47. Kidney	<input type="checkbox"/>	<input type="checkbox"/>	_____
48. Spleen	<input type="checkbox"/>	<input type="checkbox"/>	_____
49. Stomach	<input type="checkbox"/>	<input type="checkbox"/>	_____

SIDDHA SYSTEM OF EXAMINATION
ENNVAGAI THERVUKAL

NAA

50. Maa Padinthuruthal

1. Present ☐ 2. Absent ☐

51. Niram

1. Karuppu ☐ 2. Manjal ☐ 3. Velluppu ☐

52. Suvai

1. Pulippu ☐ 2. Kaippu ☐ 3. Inippu ☐

53. Vedippu

1. Present ☐ 2. Absent ☐

54. Vai neer oorai

1. Normal ☐ 2. Increased ☐ 3. Reduced ☐

55. **NIRAM**

1. Karuppu ☐ 2. Manjal ☐ 3. Velluppu ☐

56. **MOZHI**

1. Sama oli ☐ 2. Urattha oli ☐ 3. Thazhntha oli ☐

VIZHI

57. Niram

1. Karuppu ☐ 2. Manjal ☐
3. Sivappu ☐ 4. Velluppu ☐

58. Kanneer

1. Present ☐ 2. Absent ☐

59. Erichchal

1. Present ☐ 2. Absent ☐

60. Peelai seruthal

1. Present ☐ 2. Absent ☐

MEI KURI

61. Veppam

1. Mitham

☐

2. Migu

☐

3. Thatpam

☐

62. Viyarvai

1. Normal

☐

2. Increased

☐

3. Reduced

☐

63. Thodu vali

1. Present

☐

2. Absent

☐**MALAM**

64. Niram

1. Karuppu

☐

2. Manjal

☐

3. Sivappu

☐

4. Velluppu

☐

65. Sikkal

1. Present

☐

2. Absent

☐

66. Sirutthal

1. Present

☐

2. Absent

☐

67. Kalichchal

1. Present

☐

2. Absent

☐

68. Seetham

1. Present

☐

2. Absent

☐

69. Vemmai

1. Present

☐

2. Absent

☐**MOOTHIRAM****NEER KURI**

70. Niram

1. Venmai

☐

2. Manjal

☐

3. Crystal clear

☐

71. Manam

1. Present

☐

2. Absent

☐

72. Nurai

1. Nil

☐

2. Increased

☐

3. Reduced

☐

73. Edai(Ganam)

1. Normal ☐

2. Increased ☐

3. Reduced ☐

74. Enjal(Alavu)

1. Normal ☐

2. Increased ☐

3. Reduced ☐

75. **NEI KURI**

1. Aravam ☐

2. Mothiram ☐

3. Muthu ☐

4. Aravil Mothiram ☐

5. Aravil Muthu ☐

6. Mothirathil Aravam ☐

7. Mothirathil Muthu ☐

8. Muthil Aravam ☐

9. Muthil Mothiram ☐

10. Asathiyam ☐

11. Mellena paraval ☐

NAADI (KAI KURI)

II. Naadi Nithanam

76. Kaalam

1. Kaarkaalam ☐

2. Koothirkaalam ☐

3. Munpanikaalam ☐

4. Pinpanikaalam ☐

5. Ilavenirkaalam ☐

6. Muthuvenirkaalam ☐

77. Desam

1. Kulir ☐

2. Veppam ☐

78. Vayathu

1. 1-33yrs ☐

2. 34-66yrs ☐

3. 67-100yrs ☐

79. Udal Vanmai

1. Iyyalbu ☐

2. Valivu ☐

3. Melivu ☐

80. Naadi Vanmai

1. Vanmai ☐

2. Menmai ☐

81. Panbu

1. Thannadai	<input type="checkbox"/>	2. Puranadai	<input type="checkbox"/>	3. Illaitthal	<input type="checkbox"/>
4. Kathithal	<input type="checkbox"/>	5. Kuthithal	<input type="checkbox"/>	6. Thullal	<input type="checkbox"/>
7. Azhutthal	<input type="checkbox"/>	8. Padutthal	<input type="checkbox"/>	9. Kalatthal	<input type="checkbox"/>
10. Munnookku	<input type="checkbox"/>	11. Pinnokku	<input type="checkbox"/>	12. Suzhalal	<input type="checkbox"/>
13. Pakkanokku	<input type="checkbox"/>				

82. Naadi nadai

1. Vali	<input type="checkbox"/>	2. Azhal	<input type="checkbox"/>	3. Iyam	<input type="checkbox"/>
4. Vali Azhal	<input type="checkbox"/>	5. Azhal Vali	<input type="checkbox"/>	6. Iya Vali	<input type="checkbox"/>
7. Vali Iyam	<input type="checkbox"/>	8. Azhal Iyam	<input type="checkbox"/>	9. Iya Azhal	<input type="checkbox"/>

83. MANIKADAI NOOL (Viral Kadai Alavu)

IYMPORIGAL / IYMPULANGAL

	1. Normal	2.Affected
84. Mei	<input type="checkbox"/>	<input type="checkbox"/> _____
85. Vaai	<input type="checkbox"/>	<input type="checkbox"/> _____
86. Kan	<input type="checkbox"/>	<input type="checkbox"/> _____
87. Mookku	<input type="checkbox"/>	<input type="checkbox"/> _____
88. Sevi	<input type="checkbox"/>	<input type="checkbox"/> _____

KANMENTHIRIYANGAL / KANMAVIDAYANGAL

	1. Normal	2.Affected
89. Kai	<input type="checkbox"/>	<input type="checkbox"/> _____
90. Kaal	<input type="checkbox"/>	<input type="checkbox"/> _____
91. Vaai	<input type="checkbox"/>	<input type="checkbox"/> _____
92. Eruvai	<input type="checkbox"/>	<input type="checkbox"/> _____
93. Karuvaai	<input type="checkbox"/>	<input type="checkbox"/> _____

94. YAAKAI

- | | | | | | |
|---------------|--------------------------|---------------|--------------------------|--------------|--------------------------|
| 1. Vali | <input type="checkbox"/> | 2. Azhal | <input type="checkbox"/> | 3. Iyam | <input type="checkbox"/> |
| 4. Vali Azhal | <input type="checkbox"/> | 5. Azhal Vali | <input type="checkbox"/> | 6. Iya Vali | <input type="checkbox"/> |
| 7. Vali Iyam | <input type="checkbox"/> | 8. Azhal Iyam | <input type="checkbox"/> | 9. Iya Azhal | <input type="checkbox"/> |

95. GUNAM

- | | | | | | |
|------------------|--------------------------|---------------|--------------------------|----------------|--------------------------|
| 1. Sathuva Gunam | <input type="checkbox"/> | 2. Raso Gunam | <input type="checkbox"/> | 3. Thamo Gunam | <input type="checkbox"/> |
|------------------|--------------------------|---------------|--------------------------|----------------|--------------------------|

UYIR THATHUKKAL

I. VALI

- | | 1. Normal | 2. Affected |
|---------------------------------|--------------------------|--------------------------------|
| 96. Uyirkkaal (Praanan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 97. Keelnokkukkaal (Abaanan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 98. Melnokkukkaal (Udhaanan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 99. Paravukaal (Viyaanan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 100. Nadukkaal (Samaanan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 101. Vaanthikkaal (Naahan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 102. Vizhikkaal (Koorman) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 103. Thummikkaal (Kirukaran) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 104. Kottavikkaal (Devathathan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 105. Veengukkaal (Dhananjeyan) | <input type="checkbox"/> | <input type="checkbox"/> _____ |

II. AZHAL

- | | 1. Normal | 2. Affected |
|-----------------------------------|--------------------------|--------------------------------|
| 106. Aakkanal (Anar pitham) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 107. Vannayeri (Ranjaka pitham) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 108. Aatralangi (Saathaka pitham) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 109. Nokkazhal (Aalosaka pitham) | <input type="checkbox"/> | <input type="checkbox"/> _____ |
| 110. Ollolithhee (Prasaka pitham) | <input type="checkbox"/> | <input type="checkbox"/> _____ |

III. IYAM

	1. Normal	2. Affected
111. Ali Iyam (Avalambagam)	<input type="checkbox"/>	<input type="checkbox"/> _____
112. Neerppi Iyam (Kilethagam)	<input type="checkbox"/>	<input type="checkbox"/> _____
113. Suvaikaan Iyam (Pothagam)	<input type="checkbox"/>	<input type="checkbox"/> _____
114. Niraivu Iyam (Tharpagam)	<input type="checkbox"/>	<input type="checkbox"/> _____
115. Ontri Iyam(Santhigam)	<input type="checkbox"/>	<input type="checkbox"/> _____

UDAL THATHUKKAL

	1. Normal	2. Affected
116. Saaram	<input type="checkbox"/>	<input type="checkbox"/> _____
117. Senneer	<input type="checkbox"/>	<input type="checkbox"/> _____
118. Oon	<input type="checkbox"/>	<input type="checkbox"/> _____
119. Kozhuppu	<input type="checkbox"/>	<input type="checkbox"/> _____
120. Enbu	<input type="checkbox"/>	<input type="checkbox"/> _____
121. Moolai	<input type="checkbox"/>	<input type="checkbox"/> _____
122. Suronitham/Sukkilam	<input type="checkbox"/>	<input type="checkbox"/> _____

MUKKUTRA MIGU GUNAM

I. Vali Migu Gunam

	1. Present	2. Absent
123.Emaciation	<input type="checkbox"/>	<input type="checkbox"/>
124.Blackish colouration of body	<input type="checkbox"/>	<input type="checkbox"/>
125.Desire to take hot food	<input type="checkbox"/>	<input type="checkbox"/>
126.Tremors	<input type="checkbox"/>	<input type="checkbox"/>
127.Abdominal distension	<input type="checkbox"/>	<input type="checkbox"/>
128.Insomnia	<input type="checkbox"/>	<input type="checkbox"/>

129.Constipation	<input type="checkbox"/>	<input type="checkbox"/>
130.Weakness	<input type="checkbox"/>	<input type="checkbox"/>
131.Weakness of sense organs	<input type="checkbox"/>	<input type="checkbox"/>
132.Giddiness	<input type="checkbox"/>	<input type="checkbox"/>
133.Sluggishness	<input type="checkbox"/>	<input type="checkbox"/>

II. Azhal Migu Gunam

	1. Present	2. Absent
134.Yellowish discolouration of the skin	<input type="checkbox"/>	<input type="checkbox"/>
135.Yellowish discolouration of the eye	<input type="checkbox"/>	<input type="checkbox"/>
136.Yellowish discolouration of urine	<input type="checkbox"/>	<input type="checkbox"/>
137.Yellowish discolouration of faeces	<input type="checkbox"/>	<input type="checkbox"/>
138.Increased appetite	<input type="checkbox"/>	<input type="checkbox"/>
139.Burning sensation in the body	<input type="checkbox"/>	<input type="checkbox"/>
140.Insomnia	<input type="checkbox"/>	<input type="checkbox"/>

III. Iyam Migu Gunam

	1. Present	2. Absent
141.Excessive salivation	<input type="checkbox"/>	<input type="checkbox"/>
142.Reduced appetite	<input type="checkbox"/>	<input type="checkbox"/>
143.Heaviness of the body	<input type="checkbox"/>	<input type="checkbox"/>
144.Whiteness of the body	<input type="checkbox"/>	<input type="checkbox"/>
145.Chillness of the body	<input type="checkbox"/>	<input type="checkbox"/>
146.Cough	<input type="checkbox"/>	<input type="checkbox"/>
147.Increased sleep	<input type="checkbox"/>	<input type="checkbox"/>
148.Eraippu (Dyspnea)	<input type="checkbox"/>	<input type="checkbox"/>
149.Sluggishness	<input type="checkbox"/>	<input type="checkbox"/>

150. NOI UTRA KAALAM

- | | | | |
|-------------------|--------------------------|---------------------|--------------------------|
| 1. Kaarkaalam | <input type="checkbox"/> | 2. Koothirkaalam | <input type="checkbox"/> |
| 3. Munpanikaalam | <input type="checkbox"/> | 4. Pinpanikaalam | <input type="checkbox"/> |
| 5. Ilavenirkaalam | <input type="checkbox"/> | 6. Muthuvenirkaalam | <input type="checkbox"/> |

151. NOI UTRA NILAM

- | | | | | | |
|------------|--------------------------|-----------|--------------------------|-------------|--------------------------|
| 1. Kurinji | <input type="checkbox"/> | 2. Mullai | <input type="checkbox"/> | 3. Marutham | <input type="checkbox"/> |
| 4. Neithal | <input type="checkbox"/> | 5. Paalai | <input type="checkbox"/> | | |

152. Date of Birth

153. Time of Birth

154. Place of Birth

155. NATCHATHIRAM

- | | | | | | |
|-----------------|--------------------------|-------------------|--------------------------|------------------|--------------------------|
| 1. Aswini | <input type="checkbox"/> | 2. Barani | <input type="checkbox"/> | 3. Karthikai | <input type="checkbox"/> |
| 4. Rohini | <input type="checkbox"/> | 5. Mirugaseeridam | <input type="checkbox"/> | 6. Thiruvathirai | <input type="checkbox"/> |
| 7. Punarpoosam | <input type="checkbox"/> | 8. Poosam | <input type="checkbox"/> | 9. Aayilyam | <input type="checkbox"/> |
| 10. Makam | <input type="checkbox"/> | 11. Pooram | <input type="checkbox"/> | 12. Utthiram | <input type="checkbox"/> |
| 13. Astham | <input type="checkbox"/> | 14. Chithirai | <input type="checkbox"/> | 15. Swathi | <input type="checkbox"/> |
| 16. Visakam | <input type="checkbox"/> | 17. Anusam | <input type="checkbox"/> | 18. Kettai | <input type="checkbox"/> |
| 19. Moolam | <input type="checkbox"/> | 20. Pooradam | <input type="checkbox"/> | 21. Utthiradam | <input type="checkbox"/> |
| 22. Thiruvonam | <input type="checkbox"/> | 23. Avittam | <input type="checkbox"/> | 24. Sadayam | <input type="checkbox"/> |
| 25. Poorattathi | <input type="checkbox"/> | 26. Utthirattathi | <input type="checkbox"/> | 27. Revathi | <input type="checkbox"/> |
| 00. Not known | <input type="checkbox"/> | | | | |

156. **RAASI**

1.Mesam	<input type="checkbox"/>	2.Rishabam	<input type="checkbox"/>	3.Midhunam	<input type="checkbox"/>
4.Kadakam	<input type="checkbox"/>	5.Simmam	<input type="checkbox"/>	6.Kanni	<input type="checkbox"/>
7.Thulam	<input type="checkbox"/>	8.Viruchiham	<input type="checkbox"/>	9.Dhanusu	<input type="checkbox"/>
10.Maharam	<input type="checkbox"/>	11.Kumbam	<input type="checkbox"/>	12.Meenam	<input type="checkbox"/>
00.Not known	<input type="checkbox"/>				

EXAMINATION

1. Meningeal Signs

Present

Absent

157. Neck Stiffness	<input type="checkbox"/>	<input type="checkbox"/>
158. Kernig's sign	<input type="checkbox"/>	<input type="checkbox"/>
Brudzinski's sign		
159. Neck sign	<input type="checkbox"/>	<input type="checkbox"/>
160. Leg sign	<input type="checkbox"/>	<input type="checkbox"/>

2. Ophthalmoscopic Examination

Yes

No

161. Papilloedema	<input type="checkbox"/>	<input type="checkbox"/>
-------------------	--------------------------	--------------------------

INVESTIGATION

BLOOD

162. TC (Cells/cumm)	:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
163. DC (%)	:	1.P <input type="text"/> <input type="text"/> 2.L <input type="text"/> <input type="text"/> 3.E <input type="text"/> <input type="text"/> 4.B <input type="text"/> <input type="text"/> 5.M <input type="text"/>
164. Hb (gms%)	:	<input type="text"/> <input type="text"/> .
165. E.S.R. (mm/hr)	:	1.1/2hr <input type="text"/> <input type="text"/> 2.1hr <input type="text"/> <input type="text"/>

166. Blood Sugar (R) (mgs %) :

167. Blood Urea (mgs %) :

168. Serum Creatinine (mgs %) :

	Positive	Negative
169. C- reactive protein :	<input type="text"/>	<input type="text"/>
	Reactive	Non reactive
170. V.D.R.L. Test :	<input type="text"/>	<input type="text"/>
	Positive	Negative
171. E.L.I.S.A. Test for H.I.V. :	<input type="text"/>	<input type="text"/>

URINE

172. Albumin : 0.Nil 1.Trace 2. +
 3.++ 4.+++

173. Sugar : 0.Nil 1.Trace 2. +
 3.++ 4.+++

Deposits	Yes	No
174. Pus cells :	<input type="text"/>	<input type="text"/>
175. Epithelial cells :	<input type="text"/>	<input type="text"/>
176. RBCs :	<input type="text"/>	<input type="text"/>
177. Crystals :	<input type="text"/>	<input type="text"/>

MOTION

178. Ova : _____

179. Cyst : _____

180. Occult blood : _____

SKIN TEST**Positive****Negative**

181. Mantoux Test

☐☐

182. Chest X-ray-PA View

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183. C.T.Scan of Brain

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184. M.R.I.Scan of Brain

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185. M.R.I. Scan of Thorax

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186. C.S.F. Analysis

Cell count (Cells/cu mm) : _____

Type of Cells : _____

C.S.F. Sugar (mgs/dl) : _____

C.S.F. Protein (mgs/dl) : _____

C.S.F. Chloride (mgs/dl) : _____

CLINICAL SYMPTOMS OF VACHCHIRAROOPAM

	Present	Absent
187. Head retraction	<input type="checkbox"/>	<input type="checkbox"/> _____
188. Fixed gaze	<input type="checkbox"/>	<input type="checkbox"/> _____
189. Snoring like voice produced	<input type="checkbox"/>	<input type="checkbox"/> _____
190. Severe headache	<input type="checkbox"/>	<input type="checkbox"/> _____
191. Tremulousness	<input type="checkbox"/>	<input type="checkbox"/> _____
192. Muscle spasm and stiffness	<input type="checkbox"/>	<input type="checkbox"/> _____
193. Yawning , lethargy, making noise due to irritation	<input type="checkbox"/>	<input type="checkbox"/> _____
194. Diminution of faeces and urine	<input type="checkbox"/>	<input type="checkbox"/> _____

PROTOCOL

A STUDY TO DIAGNOSE VACHCHIRAROOPAM THROUGH SIDDHA DIAGNOSTIC METHODOLOGY

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1. BACKGROUND

VACHCHIRAROOPAM

It defines inflammation of meninges which causes stiffness of body in chronic stage.

It is an infection of the central nervous system.

According to the literature Yugi vaithiya sinthamani, vachchiraroopam has been mentioned as,

”விதியான பிடரியைத்தான் மிகவி முத்து
மிகக்கண்க ளைசவில் லாமலே நோக்கித்
ததியான குறோக்கைபோற் சத்தம் பெற்றுத்
தலைநோவு மிகுதியாய் நடுக்க லுற்று
குதியான நரம்பிழுத்துத் திமிருண் டாகிக்
கொட்டாவி சோம்பலாய்க் கூச்ச லுண்டாய்
வதியான மலசலமுஞ் சுறுக்கி வீழும்
வச்சிரரூ பந்தன்னின் வகையி தாமே”
பாடல் எண்-302.

Vachchiraroopam is one of the vatha disease in which the vali humour is abnormally changed. It shows symptoms such as head(occipital area) retraction, fixed gaze, snoring like sound produced which is followed by severe headache, tremulous ness, muscle spasm and stiffness , yawning, lethargy, irritability, cry, diminution of faeces and urine.

2. AIMS

a) PRIMARY AIM

To diagnose Vachchiraroopam through Mukkutram,Envagai thervu.

b) SECONDARY AIM

To evaluate the etiology and pathology of Vachchiraroopam through Nilam, Kaalam and Sothidam.

3. POPULATION AND SAMPLE

Vachchiraroopam (as explained above under the song) patients satisfying the inclusion and exclusion criteria mentioned below.

The samples consists of Vachchiraroopam patients attending the O.P. department of Govt Siddha Medical College, Palayamkottai, under the guidance of Faculties and Head of the Department of post graduate, Noi naadal department.

4. SAMPLE SIZE

A sample size of 20 patients will be taken for detailed study.

5. INCLUSION CRITERIA

1. Complaints - more than 4 weeks
2. Willing to give blood and urine Specimen for Investigations whenever required.

6. EXCLUSION CRITERIA

1. Associated with Vomiting
2. Associated with Convulsion.

7. CONDUCT

Vachchiraroopam patients satisfying the inclusion and exclusion criteria will be included in this study. Envagai thervu, Nilam, Kaalam and Sothidam of the patients will be noted.

8. FORM

Form - Diagnostic proforma for Vachchiraroopam.